

The CHILDREN'S NEWSPAPER

AND CHILDREN'S PICTORIAL

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A GREAT AIRSHIP AND ITS QUEST

GIANT AIRSHIP'S JOURNEY

IS THERE AN ARCTIC CONTINENT?

Colony that Disappeared Mysteriously from History

MEMORY OF A LOST RACE

It is proposed that the new American airship, the ZR 1, shall fly across the North Pole next summer. If it succeeds, Mr. Stefansson, the famous explorer, believes the trip will be one of the turning points in history.

He is probably thinking of the suggestion that the airship may find an Arctic continent, with people living on it.

"In the centre of the unknown area of the Polar Sea," says Commander Fitzhugh Green, of the United States Naval College at Newport, himself an Arctic explorer of wide experience, "may be discovered a vast continent, heated by subterranean fires, and inhabited by the descendants of the lost Norwegian Colony of Greenland."

Ruined Homes of Greenland

It seems a wild dream, but how like a dream is the past when we know its story! With his own eyes, says Commander Green, he has seen in Greenland the ruined stone houses of a lost Norwegian colony.

In the year 986, Eric the Red, who had discovered Greenland, founded two colonies there, an eastern and a western, which seem to have flourished for a time, but were afterwards neglected by Norway, under whose domination they had come. Soon after 1340 they were attacked by Eskimos from the north, and their connection with Europe grew less and less till, in 1448, all association ceased, and even Greenland was completely forgotten.

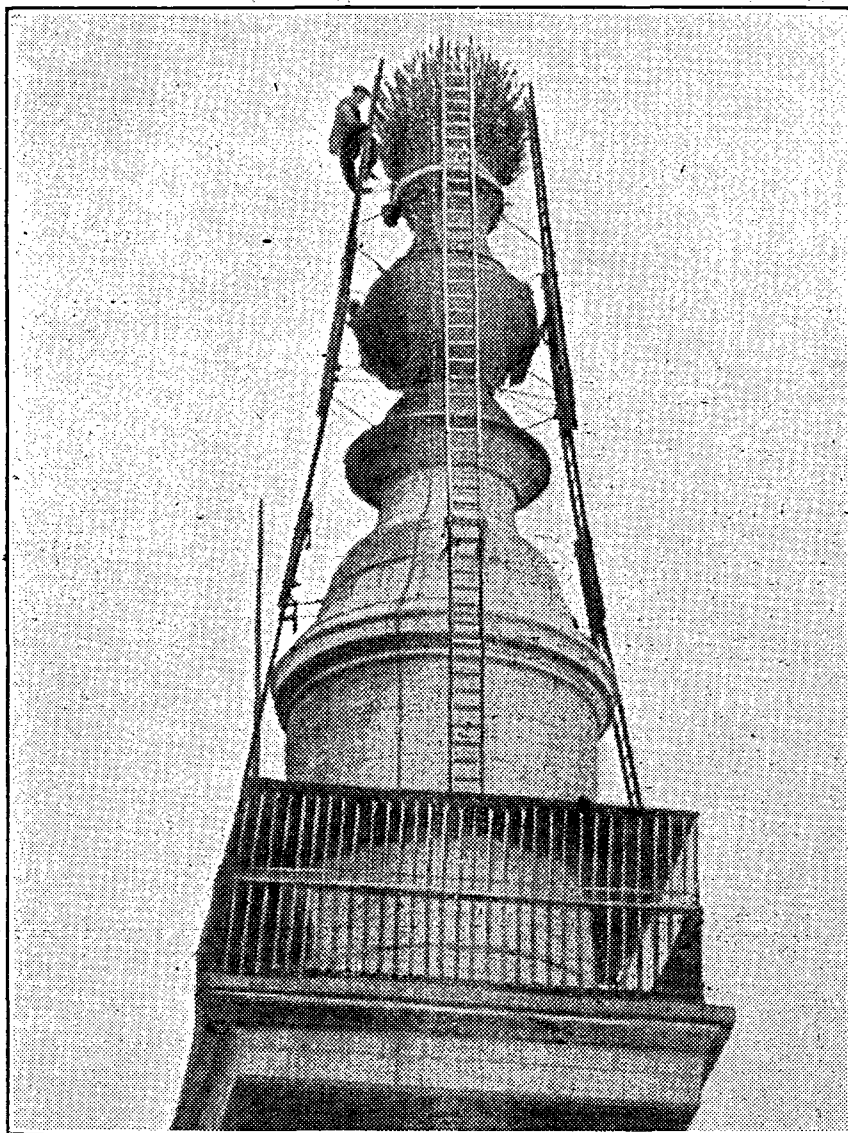
The Great Riddle

When the land was re-discovered in 1585, by John Davis, the Eskimos were the only inhabitants. The Norwegian colonists had all vanished. So mysterious was this disappearance that it has been called "the greatest riddle in the history of the world."

Where did the people go? They could not have gone to sea, for they had only one or two ships, and, as Greenland is without trees, they could build no more. They could hardly have been destroyed completely by the Eskimos, for their numbers and superior skill and weapons would have been more than a match for the enemy. There is no reason to suppose they had suffered from any unusual epidemic.

Ever since John Davis discovered this mysterious disappearance the possibility of remnants of a Scandinavian population being found somewhere in the Arctic has been the subject of discussion, and expeditions have been fitted out from time to time to make a search. That the colony was a com-

A Brush-Up for the Monument



For the first time for nine years London's Monument, set up to commemorate the Great Fire of 1666, has been cleaned outside; and here we see a man at work on the golden flames at the pinnacle of the column. Sir Christopher Wren intended this monument for the vertical tube of a telescope, but it swayed in the wind too much

paratively large and flourishing one is clear from the remains of houses that have been found. There are traces of at least a hundred settlements, with anything up to thirty houses each, and the vanished population has been estimated at from ten thousand to a hundred thousand.

These ruins are grouped in what are, for Greenland, fertile spots round the heads of the fiords; and there are two main settlements, one in the south, and one farther north. But although exhaustive search has been made, no such ancient settlements have ever been found on the east coast; and this is not surprising, for the east coast is much bleaker and more inhospitable than the west.

But the story does not remain there. The Eskimos have always had a tradition that the white man of long ago went away suddenly to a warm land in the north, where the Eskimos dared not follow for fear of evil spirits.

Is it possible there might be such a land? Commander Green, who has travelled in many parts of the Arctic,

believes it is. We must remember that within the boundaries of the Polar Sea lies the greatest unexplored area on the globe, a million square miles on which no modern eye has gazed. Somewhere in this great solitude, says Commander Green, there may be a land of at least 50,000 square miles, encircled by a volcanic range of mountains and heated by hot springs, spouting geysers, and numerous boiling pools.

This heat may make of the land a fertile plateau, capable of growing food supplies for a considerable population. At Disco, in Greenland, orchids, warmed by natural hot springs, blossom out of doors in winter, and the same feature multiplied would make possible a habitable country in the Polar Sea. It is a thrilling speculation, and who knows what may come of it? Picture on page 7

CANADA'S BOY PARLIAMENTS

Things are again taking shape for the various Provincial elections for the Boy Parliaments which sit in Canada during the week between Christmas and New Year's Day.

LOCUST FACTORY IN SOUTH AFRICA

USING A PEST

Insects that Eat the Crops Now to Enrich the Soil

INCREDIBLE SWARMS IN THE AIR

The locust plague in South Africa has led to the establishment of a new and flourishing industry.

The C.N. mentioned last week that in Johannesburg the bodies of the locusts had been pounded into a paste and used for poultry food. This idea has been carried farther, and now a company, known as the South African Locust Products Company, has been formed to exploit the pest and put it to good uses.

A factory has been started in Johannesburg, and there the insects are prepared in various ways and made up into cattle food as well as poultry food, while for the use of human beings a locust meal biscuit is manufactured, resembling a ginger-nut in colour, shape and size. It is nourishing and appetising, and is finding favour with white people as well as with black.

Locusts as Food

It must be remembered, of course, that for centuries the locust has been an article of diet in the East. It is among the clean creatures allowed as food to the Jews by the Law of Moses; and John the Baptist's food consisted largely of locusts—not locust beans, as is sometimes suggested.

The locusts are also made into fertilisers for the land—a striking irony, the very creatures that have devastated the land being used to make it once more bring forth food in abundance.

That this new industry is likely to be a permanent one is proved by the fact that the locust products are being sold not only in Africa, but also in Europe. An order was received the other day from a firm in Holland for a hundred tons of locust fertiliser.

Fighting the Plague

The South African Department of Agriculture is giving its support to the industry, and it is felt that the reward of two shillings given for every fifty pounds of locusts collected for the factory and delivered to the nearest railway station for transit to Johannesburg will do more than anything to encourage people to cooperate in fighting the plague.

It might be thought that even locust swarms would not supply sufficient material for an industry of this kind, but few people outside a locust-stricken country have any idea how big a swarm really is. One that passed over the Red Sea was 2000 square miles in extent, and was estimated to weigh 42,850 million tons; and in Cyprus the weight of eggs alone collected and destroyed in one season was over 1300 tons.

RICH LADY IN THE TRAIN

POOR WOMAN PAYS HER FARE

A Beautiful Story Told of Mrs. Gladstone

HELPING 46,981 PEOPLE

Good stories are always cropping up about good people. That is one of the delightful ways in which the memory of a good person is kept green in the world's gratitude. We love talking about good people and handing on these good stories directly we hear them.

For example, we hasten to broadcast this beautiful story told by Mr. T. P. O'Connor of Mrs. Gladstone, that famous old lady who looked after hundreds and hundreds of people besides "Mr. G.," and who was as downright, self-forgetful, and eccentric as dear Betsy Trotwood in David Copperfield.

The One Chance

One day Mrs. Gladstone was travelling to the Home she had established at Woodford for sick poor people. In the train was a girl who seemed greatly distressed. Mrs. Gladstone studied her, made some friendly remark, and soon had the girl's story.

This girl was the bride of a man who had been seized by consumption. It was not a hopeless case. There was just one chance that his life might be saved. But what was that one chance? A visit to Australia! How could they afford such a journey? They were poor. They had no one to help them. Alas! there was nothing for this pretty young bride to do but stay in England and watch her husband die by inches.

Going Past the Station

But Mrs. Gladstone thought that the visit to Australia might be accomplished. She told the girl so, and said that she must come to see her next day in St. James's Square. Imagine the amazement of the girl when she realised that she was talking to the great Mrs. Gladstone—the rich Mrs. Gladstone who lived in St. James's Square.

Then something happened. Absorbed in her effort to comfort this stranger, Mrs. Gladstone had gone past Woodford Station. In discovering her mistake she also discovered that she would have to pay her fare back to Woodford. She opened her bag, she peeped into her purse, she ransacked her pockets. Not a penny! What was she to do? There was nothing for the grand and rich Mrs. Gladstone to do but to borrow the money from the poor girl she had been comforting on the way from London!

A Wonderful Old Lady

Was there ever such a beautiful end to a beautiful story? It is beautiful because it shows how utterly indifferent to herself and to money was this wonderful old lady who went about the world mothering the friendless and comforting the sorrowful.

You may realise how hard she worked at the Catherine Gladstone Home at Woodford when you learn that it took three people to fill her place after her retirement to Hawarden. And how many grateful poor people do you think have passed through that Home of hers? The number is 46,981. That is something to leave behind us on this Earth when we go—the love and gratitude of an army of poor people. How much greater a legacy it is than millions!

BURSTING OF A DAM

Millions of Tons of Water Sweep Over a Countryside

TERRIBLE DISASTER IN ITALY

The extraordinary rains in the South of Europe have caused a terrible disaster in North Italy.

Owing to the enormous pressure of the water in Lake Gleno, a dam burst, letting loose about 35 million cubic feet of water; and this great torrent swept over the countryside, completely destroying three communes.

Six hundred people and thousands of animals were drowned, three villages were completely destroyed, and five electric light plants were demolished. These electric light works supplied light to the entire province of Brescia, which, owing to the disaster, was thus left in darkness at night.

Rescue work was difficult owing to the short daylight and the masses of wreckage swirling about in the rushing water, which in some parts was 30 feet deep.

The damage done is reckoned at quite £2,000,000, for the hydro-electric plant destroyed alone cost £1,200,000. The district involved was a rich agricultural country with some of the most fruitful farms in Italy.

FOSSIL IN A PAVING STONE

Strange Discovery on a London Footpath

A ROAD THAT WAS CARRIED AWAY BY BOYS

A fossil has been found in a paving-stone at Hampstead, a northern suburb of London, and has been removed to the town hall for preservation.

For 18 months past Mr. Vere G. Webb has been watching a curious mark in a paving-stone near his house. At last the wear and tear of innumerable feet have brought to light a fine section of a head like that of a bullock, showing the crest, the horns, with their cores, the orbit of one eye, one nostril, and the animal's muzzle.

The strange thing is that this stone should have been quarried and cut into a slab without the fossil being noticed or, if noticed, without sufficient interest being aroused to preserve it.

Geology in the Street

It is not the first time that a fossil has been found lying on the surface of a London roadway. Some years ago a schoolboy, learning geology, was walking home across an East End thoroughfare, where a mass of stone fragments had been thrown down and spread out ready for rolling in, when he noticed the fossil of a sea-urchin.

Further examination revealed among the stones several other fossils, and then it was seen that the stones themselves were not all of granite, but included mica-schist, gneiss, oolite, sandstone, limestone, basalt, serpentine, and many other kinds of rock. The boy made quite a good collection, which he still possesses, and with which he took more than one prize at local educational exhibitions.

But the amusing part of the story is that he told his schoolfellows of his find, and they also came in large numbers and began to collect. At last a watchman had to be put there to prevent the whole road being carried off.

UNDER LONDON

EXTRAORDINARY COLLAPSE INTO A TUBE

Immense Crater in the Open Street

ESCAPE OF A TRAMCAR

How strange are the antics of accident! How original! And an accident seems to be specially surprising in the midst of modern inventions. The accident in underground London not long ago was a remarkable succession of startling incidents.

Underground London, with its tubes, its mains for water and gas, its cables and wires and sewers, is a burrowing world to itself.

At the end of November, under Newington Causeway, quite a number of these underground arrangements suddenly went wrong, with surprising results, but happily with no loss of life.

Reconstruction of the underground railway from Clapham to the City was going on while trains were running on the old line, when a driver of one of the trains noticed earth dropping from the top of the tunnel on to the roofs of his carriages. He gave an alarm at the next station and the traffic was stopped.

The stoppage was most timely, for almost immediately the earth caved in above, and a small crater began to form. Immediately above was the Newington Causeway, the chief thoroughfare southward from London Bridge, with trams and all kinds of vehicular traffic; heavy and light, on its solid surface, and masses of pipes underneath carrying gas, water, electricity, and drainage.

The Roadway Falls In

Suddenly the crater shivering down below reached the top, the roadway fell in, and a hole about eight yards wide belched up fire like a genuine crater. The pipes under the roadway had broken, owing to the subsidence of the earth underneath them, and the escaping gas from the ruptured main had fired and burst with a loud roar into the street above. A tramcar and a horse and cart were just missed, and another tramcar stopped on the edge of the gulf.

Presently the gas was cut off, the fire subsided, and London underground burrowings were at that point paralysed for the time being by a little landslip far below. Man's constructions, far more solid than the so-called solid earth, had been crumpled up, while trains and trams and traffic were rushing to and fro at their busiest period, when the City is emptying its people into the suburbs; yet not a life was lost, though many were on the edge of danger.

DOGS THAT KILL SNAKES

How the Cobra was Attacked

Some weeks ago we quoted from a letter written by a South African reader about the skill of a cat in killing snakes. The letter ended: "On the other hand, dogs have no chance in dealing with deadly snakes, for they inevitably sniff at the snake first and so get bitten."

Several readers challenge this statement. An Australian reader says:

"The man who wrote that dogs won't kill snakes was never in Australia, as every dog there will kill them. I have seen dozens of dogs kill snakes."

"I have a dog that will kill any snake you find for him, but will not hunt for them himself. The dog I had before him must have averaged a snake a day. I once saw him kill three in twenty minutes."

Another reader says: "We had an old dog in South India known for miles round as the Cobra-killer. His method was not to sniff at the snake, but to get behind it and run along by its side, then suddenly grasp it in the middle, shake it vigorously, and fling it from him. This treatment dazed the cobra, and it was then killed by the natives."

DOCTOR'S LONG WAIT

Through Failure to Success

THE PRIZE OF THE YEARS OF STRUGGLE

The Nobel Prize of 40,000 dollars for successful scientific research, which has been awarded for the discovery and perfecting of insulin, the new cure for diabetes, is being divided between four doctors, Dr. Banting, who first devised the scheme for producing insulin, and his three comrades in carrying on experiments.

The three are Professor McLeod, of Toronto University, where the experiments were made; Dr. Collip, of Alberta University; and Dr. Best. As Dr. McLeod expresses it, "It was team work that did it." So the four members of the team divide the prize awarded to their leader, Dr. Banting.

Behind this latest advance in the knowledge that relieves human suffering is a fine story, showing how triumphant romance is often hiding in the midst of what looks like bitter failure.

Dr. Banting, a thoughtful young practitioner, set up as a doctor in London, but waited in vain for patients to come to him. He was unknown, and nobody seemed to need him. His prospects were dark almost to hopelessness.

The Great Rewards

But he used his want of work as a doctor as an opportunity for more study in the cause of human knowledge, and by his study and experiments in the months of apparent failure, he came on the track of insulin.

Then, leaving London and his scene of failure, he went to Canada, and at Toronto joined with Dr. McLeod, and the other colleagues mentioned, in perfecting the discovery he could see ahead. And now the doctor who had no patients is known throughout the world.

The far greater rewards, however, are the relief of human suffering, and the formation of a fund of £200,000 for endowing future research on the lines pursued by Dr. Banting when he seemed to be a failure in London.

There have been many instances in the past of knowledge rising resplendent like the fabled phoenix from the ashes of failure, but none more striking than this triumph of Dr. Banting.

Wise Things Just Said

Mr. John Drinkwater, the poet, speaking at the Poets' Club:

"It is up to everybody who cares for poetry to be staunch about it, and never be afraid of saying that poetry is very important, more important than governments and politicians."

Mr. Selfridge, just home from America:

"The working man who used to put his money in alcohol now puts it in savings banks, and has achieved a higher standard of living for his family."

Mr. S. M. Bruce, Prime Minister of the Australian Commonwealth:

"The one thing we have to bear in mind is to keep the League of Nations in existence, keep it functioning. Whether it is this league or a greater league that will spring up in a few years, we have to keep this idea alive."

Luther Burbank, the great plant wizard:

"Give a child a flower garden, teach it something about flowers, and it is very unlikely it will grow up to be bad. No man about to murder somebody ever steps in a flower garden to pick a rose."

HUNT FOR THE GIANT TORTOISE STRUGGLING THROUGH THE SPIDER'S WEBS

The Solitary Reptile Found
in an Old Crater

CREATURE WHICH IS ALMOST EXTINCT

A party of American naturalists have just been making another journey to the Galapagos Islands, hoping to find still another giant tortoise left alive. They landed on Duncan Island and made their way into the interior, walking through miles of thorny tangle and scrub and blinding spiders' webs until they came to an old overgrown crater in the heart of the island, a crater three-quarters of a mile across.

Down in this immense hollow, in which, says the man who tells the story, armies could have fought and no one been any the wiser, a solitary tortoise was found among the monster grasses growing there. It was not a full-sized giant, but it was a tortoise of the kind found only in the Galapagos Islands, and these are of intense interest because they are the last link with an ancient period of the Earth's development.

Tortoise Carried on Poles

The band of naturalists toiled back across the island, so weary that each yard seemed a mile, carrying the tortoise slung like a palanquin on poles. At times they despaired of reaching their ship, because of the dangerous nature of the land. The Sun went down and "the Moon, like a flower in heaven's high bower," as William Blake says, watched this curious party, hour after hour, go labouring on.

The tortoise was safely shipped, and the vessel steamed off for New York. But, alas, the prisoner died on the way, and the Zoological Park authorities have been disappointed once more.

It would seem that Mother Nature is punishing men for their sad greed. Two or three hundred years ago there was a great colony of giant tortoises living on the islands—called Galapagos, after the Spanish word for tortoise, by sailors who discovered them.

Living on Reptile Flesh

The seamen who continued to visit the islands found that the monsters were good food, and began to kill them and take them away. In eighteen months three hundred thousand Galapagos tortoises were hunted down and carried off by whalers and other men, who found that they would live in the ship's hold without food for months at a time. The sailors were thus sure of food on their longest voyages.

Before the day came when men were interested enough to save them, there were only a few left, and these were at once placed under Government protection. One was taken to St. Helena, and was there with Napoleon in his exile. We gave a photograph of him in the C.N. not long ago.

The British Take Possession

Another was sent to Port Louis in Mauritius, and when this island passed eventually from French into British possession, in 1810, the tortoise was specially mentioned in official papers and taken over with the fortress guns as part of the equipment of the port. Just how old he was it is difficult to say, for when he was taken to Mauritius in 1766 by the Chevalier de Fresne, a French explorer, he was already fully grown.

C.N. readers will hope very much that the naturalists will make another of those wonderful and arduous journeys to Galapagos, because, if there was one tortoise left, there may perhaps be another, and it would be very fine to have one of these giant tortoises cared for in the Zoological Park of New York and another in our London Zoo.

GETTING READY FOR CHRISTMAS



Stacking potted Christmas trees for next week's markets



Unloading a big consignment of holly



Happy Christmas shoppers leave the stores with their purchases



The busy rush of Christmas parcels at Mount Pleasant sorting office, London

Everyone is now preparing for the Christmas festival, and these pictures show us some of the activities which the happy season brings in town and country. To postal workers and shopkeepers it is the busiest season in all the year

THE FARMER AND HIS WIRELESS

RINGING UP FOR WEATHER AND NEWS

How the Government Helps the
People in America

BROADCASTING DEVELOPMENTS

The development of the American Government's weather service in recent months has been amazing.

Tens of thousands of observers all over the country and at sea are collecting data, and these facts are made the basis of forecasts which are of great help to farmers, fruit-growers, and navigators.

Already the weather news is being broadcast from over 150 stations in the United States, and it is hoped that more than 500 broadcasting stations will soon be sending out weather reports and forecasts three times a day.

Many thousands of reports have to be considered and compared before a forecast can be sent out. Weather maps are made up, and on these are marked the approach of storms, news of which is wirelessly from ships at sea. Delicate instruments record the duration of sunshine, carefully-graded barometers mark the pressure of the atmosphere over thousands of square miles, anemometers at various levels indicate the direction and duration of the wind, thermometers with wet and dry bulbs measure the humidity of the air, hundreds of observers note the character and movements of the clouds; and, sitting in his office, the scientist can make up from these indications a very good forecast of what the weather is likely to be in different areas for the next 24 hours.

Watching Out for Storms

These forecasts have proved so accurate that the farmers and fruit-growers have come to place great faith in them, and they telephone to the weather bureau to find out what the weather is likely to be before starting on a new job. "Is tomorrow likely to be good haying weather? Will orchard heaters be needed tonight? What degree of cold must I allow for?" These are the sort of questions which arrive in thousands, and which are answered to the best of the ability of the experts in the weather bureau.

Farmers and fruit-growers, however, are not the only ones to benefit by these forecasts. Navigators on the Great Lakes and round the coasts are given from 12 to 24 hours' notice of approaching storms. Airmen obtain accurate reports of the condition of the upper atmosphere and the direction and force of the air currents. This information is gathered by hundreds of little balloons sent up with recording instruments.

Nearly 90 in every hundred forecasts predict the weather that actually occurs within the following 36 hours, and as experience suggests new methods of gathering data the reports are likely to prove more and more accurate.

THROUGH A SILK TUBE

A Fire Brigade Idea

The Fire Department of an American city is using a novel apparatus for rescuing people trapped in upper storeys of burning buildings.

It is a long, silk-lined net tube, one end of which the firemen attach to the upper window, while the other end is held by men in the street, who can regulate the speed of the falling body by simply raising or lowering the foot of the tube as needed.

Tests have shown that people can slide down from a fourth storey and be quite unharmed. It is much safer than a net, and not nearly so trying to the nerves as a rickety, shaking ladder.

OLD NAMES OF OLD LONDON

THE HOUND'S DITCH
Memories an Old Roman Wall Brings to Mind

HOW TO SAVE OUR GOOD NAMES

Houndsditch is a short street that connects Liverpool Street Station with Aldgate Pump.

It is trodden during the week by thousands of business folk, who are far too engrossed to think of anything but work; on Sunday it is trodden by people of another type who are far too engrossed to think of anything but Petticoat Lane market round the corner.

London's Gates

Houndsditch is part of the eastward boundary of London City. Had you, in the old days, been "without" the city wall, and wanted to be within, you would have had to ask permission at the Old Gate (Aldgate), and if dusk had fallen you might have had difficulty in persuading the wardens of the gate that you were a loyal subject. How indifferently we pass by Aldgate now!—and New Gate, and Bishop's Gate, and, most precious of all, the Temple Bar, the westward boundary of the city, where, when the King of England comes in state to visit the Lord Mayor of London, he must stop and ask for the keys before he is allowed to pass.

Ask for Temple Bar

It is sad, but that pretty name Temple Bar is in danger of passing out of the everyday speech of Londoners. It used to be a boundary quoted near and far; buses used to stop regularly at Temple Bar. Now the conductors cry out Chancery Lane instead, and a race of children will soon be born who will not know what it means to be citizens of so great and ancient a city. They will not even know what Temple Bar is; they will not know why the policemen standing westward of the Bar wear plain helmets with a button on the top and are just Metropolitan Police, and why those on the eastward side, a yard away, wear crested helmets. For these are the City of London Police—a distinction that—and they are the cream of the world's civic guard.

It is for this reason that the writer, who loves London City, always asks for a ticket to Temple Bar. Every reader of the C.N. should do the same, so that our beautiful old names and our history shall not slip into forgetfulness.

The Roman Wall

In the old days there would have been no need to tell us that the Roman wall flanked Houndsditch, for we should have seen it; no need to tell us that the Hound's Ditch was a waterway draining Moorfields into the Thames, a handy place to throw dead dogs and cats and cabbages, and old clothes, and knick-knacks people were tired of, because we should have smelt it.

And now people whose work takes them near Houndsditch can see for themselves something of its history, for, in making foundations for new warehouses about a hundred yards of the old Roman wall have been uncovered.

Some curious things have been dug out of the Hound's Ditch—coins of all times, tradesmen's counters and ancient trademarks, a sixpence given for a fairing to a lad in Queen Elizabeth's time, pieces of pottery, and a set of tiny clay rods that were used instead of curl-papers some hundreds of years ago.

Houndsditch would be described now as a commercial thoroughfare. But we know better.

CAN GREECE BE KEPT STEADY?

Country on the Brink of Revolution

MONARCHY OR REPUBLIC?

Greece is in a state of what scientific men call "unstable equilibrium." That is, it is ready to topple over into Revolution at any moment. But the most thoughtful men of all Greek parties are hoping to keep it steady.

The present Government was established, and is sustained, by the military party. It reached power through violence. Now there is a numerous party which would like to expel the Greek Royal Family and proclaim a Republic.

If that were done, probably violence would be used again, and revenge would play its bitter part at a time when Greece needs, above all other things, a steady, continuous Government and an avoidance of all changes that are not made quietly by intelligent public opinion.

That is the feeling of M. Venizelos, the wisest and most forceful of Greek statesmen. In theory, M. Venizelos is a

Life's New Voyage of Discovery

QUEER people, all down the ages, have prophesied the end of the world. Many of them spent their whole lives studying the stars or the Bible to discover the exact hour at which the Earth would rush into the Sun and be consumed by fire.

EVEN in our own day there are people who believe that Time has shot its bolt, that Evolution has exhausted itself, that Life is tired of existence, and that before many years are over this old and weary world will come to an end.

THE truth is much more interesting than that. Life is not an old man. Life is a boy, always has been a boy, and always will be a boy.

AND, what is more, Life is just now setting out on a voyage of discovery far more exciting than anything it has attempted in the past.

THE Editor would like all C.N. readers to read of this Great Adventure into the Unknown in the January number of My Magazine, which now lies side by side with the C.N. on the bookstalls.

convinced Republican, but he gravely warns those who hold the same opinions as himself that anyone who would try suddenly by force to impose a Republic on Greece would be an enemy of his party as well as of his country.

The Government of a country should only be altered by quietly formed opinion, peacefully spread. When it has become the unmistakable will of the people, expressed in an honest poll, a change may be made safely; but not till then.

Yet so volatile are the Greeks that it is possible their only statesman with a European reputation may be unable to keep them steady, and nobody knows what may happen in this little land that was once the heart of the civilisation and learning of the world.

EINSTEIN'S THIRD TEST

HIS THEORY PROVED AGAIN

How the Spectrum Vindicated the Scientist

THE SUN'S VIBRATING ATOMS

Dr. Charles E. St. John, an astronomer at the Mount Wilson Observatory, has just announced the final confirmation of the theory of Relativity by means of the last of the three great tests which Einstein himself proposed.

Readers of the C.N. will remember what these tests were.

The first was a small movement of the planet Mercury. Unknown to Einstein, astronomers had actually detected this movement long before the theory of Relativity was put forward.

The second test was the bending of rays of light from a star when these rays passed close to a heavy body like the Sun. This was splendidly confirmed by the British eclipse expedition which went to Brazil in 1919.

Light Has Weight

To make doubly sure, an American party photographed the eclipse of September last year, and, though the stars were only shifted by a thousandth of an inch on the plates, the astronomers were able to announce that Einstein's theory was confirmed within an error of one per cent. Put in another way, this result means that a ray of light has weight.

But it was the third test that aroused the greatest discussion among scientists. Einstein announced that if his theory were correct the atoms of a substance incandescent in the great heat of the Sun would vibrate slightly more slowly than the atoms of the same substance under the same conditions in a laboratory on the Earth. This would mean that the lines due to the substance in the Sun's spectrum would all have a tiny movement towards the red end of the spectrum, as compared with the lines in a similar spectrum on the Earth.

The Moving Lines

To understand this we must realise what Einstein was the first to realise—the importance of the Sun's great power of attraction. Scientists say that the Sun is surrounded by a field of attraction, or, as they call it, a gravitational field. Now, it is because the Earth and the Sun are in different parts of this gravitational field that the atoms in the Sun vibrate a shade more slowly than those on the Earth, and so we get a tiny movement in the spectral lines.

When astronomers first tried to detect this movement their results were doubtful, and Dr. St. John was among those who believed that the Einstein effect did not exist. He has now been converted, and he announces that his latest measurements convince him of the truth of Einstein's prediction.

Light from Venus

We must not, however, forget the work of Mr. Evershed, the English astronomer at Kodaikanal, in India. Mr. Evershed, in addition to making use of direct rays of sunlight for his observations, also made use of light from the planet Venus, which is, of course, reflected sunlight. When Venus is in the farthest part of her orbit, the light that reaches us from her has been reflected from that side of the Sun which is turned away from us; and so by Mr. Evershed's skill the Einstein movement has even been detected in light from the other side of the Sun. These results are very satisfying to the supporters of Einstein, who himself said his theory stood or fell by the third test.

What a pity it is that so great a man, at last vindicated in the eyes of scientists, should be compelled, as we read not long ago, to flee for his life from Germany and live in the quiet protection of Holland!

OUR WONDERFUL TRADE

WHAT EVERYBODY HAS BEEN TALKING ABOUT

Where We Buy Most and Where We Sell Most

THINGS GETTING BETTER

By Our Economic Correspondent

Everybody has been talking of trade because of the General Election, but few people know where we do the greater part of our trade.

We buy much abroad because we need the produce of other countries for food and material, and we sell much abroad because we send our goods to pay for the goods brought in.

It is very interesting to see from what countries we buy most. The Board of Trade officials have added up the totals for the first nine months of this year.

We find that of the goods brought in, called Imports, we bought altogether 787 million pounds' worth in January to September. Of these 787 millions, 547 millions came from foreign countries and 240 millions from the Empire.

The Best Markets

Now let us see which countries sent us most goods. Here is a list of imports in millions of pounds sterling:

We Bought	Millions
from America	141
from Argentina	50
from France	43
from Australia	41
from Canada	37
from New Zealand	37
from Denmark	34
from Holland	26
from Germany	25

Other big suppliers were Belgium, 20 millions, and Egypt, 20 millions.

The Best Buyers

Next we turn to our selling. Our Exports, the goods we send out, were in the first nine months of this year worth 566 million pounds, of which 348 millions were sold to foreign countries and 218 millions to the Empire.

And here are our best customers, reckoned in millions of pounds:

We Sold	Millions
to India	64
to America	44
to Australia	42
to France	37
to Germany	33
to Holland	22
to Argentina	22
to Canada	20

Other big buyers were Japan, 19 millions; Belgium, 19 millions; New Zealand, 15 millions; Italy, 15 millions; Irish Free State, 15 millions.

Then, in addition to exporting 566 millions of our own goods, we shipped out again, in the nine months, 87 million pounds' worth of imported goods.

So, this year, our overseas trade in the first nine months meant shipping in or shipping out 1,440 million pounds' worth of goods! That is over £5,000,000 worth for each day, including Sundays!

Trade Needs Peace

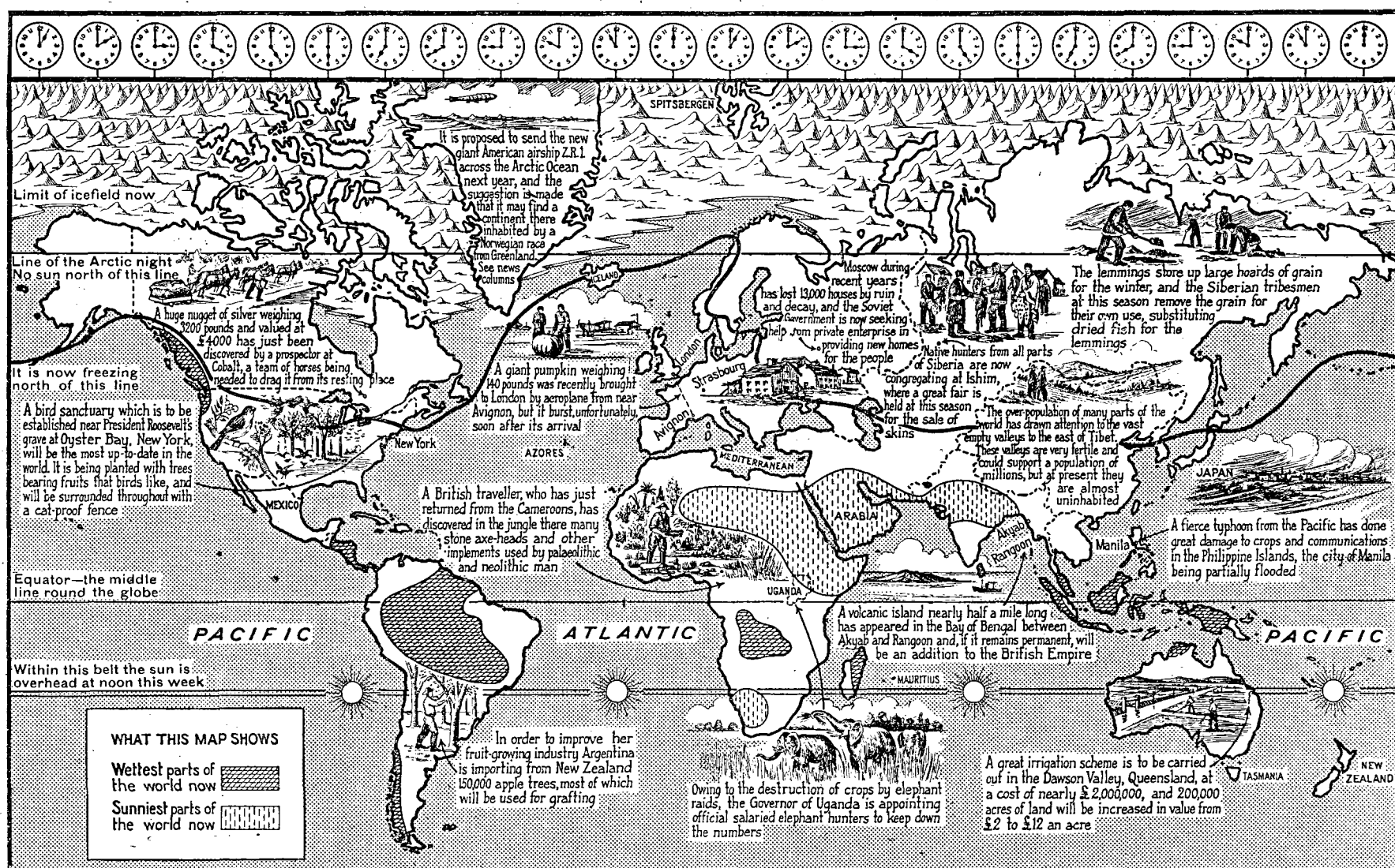
Let us try to think of all that means in hard, intelligent work. Think of the men who got the orders to send the goods, the farmers who grew the food, the miners who dug the coal and ores, the manufacturers who made the goods, the merchants who sold them, the railways which carried them to or from the ports, the clerks who added up the figures, the ships that carried the merchandise, the docks where brawny, active men hauled and lifted.

It is a wonderful story of human effort, and, once we realise it, we can never again think with indifference of the minds and sinews behind our trade.

Fortunately, we can say that trade has been improving a little of late. In October we did better than in September.

With peace in Europe our trade would undoubtedly recover its pre-war strength.

PICTURE-NEWS AND TIME-MAP SHOWING WEATHER ALL OVER THE WORLD



TANGIER

The Nations and Morocco
A FRIENDLY SETTLEMENT

By Our Political Correspondent

For many months there has been a troublesome division of the opinion of the nations about the neutralised town of Tangier in Morocco.

All the principle trading nations have rights there, and the government of the town has been uncomfortably mixed.

France, Great Britain, and Spain are the three countries most concerned, and they have been holding a friendly conference to arrange a better scheme of Government. The conference has now completed its work and arrived at a settlement by mutual goodwill.

A new Constitution has been drawn up for the district that is now to be called the Tangier Zone. The Zone remains a part of Morocco under the sovereignty of the Sultan of Morocco, and his will be the only flag flying in the district. But there will be municipal government in the town, in which the nations that have trade there will be strongly represented, and the municipality will preserve order.

The Sultan and the municipality will be equal shareholders in the port, and it will be open equally to all nations. In times of war the port will be neutral.

Spain will receive satisfactory compensation for a surrender of some of the rights she has claimed.

This settlement by mutual agreement is a most hopeful example of how difficult questions involving national jealousies may be solved by patient inquiry.

Pronunciations in This Paper

Anemometer	An-e-mom-e-ter
Bahamas	Bah-hah-mahs
Galapagos	Gah-lah-pah-gohs
Geyser	Gi-zer
Johannesburg	Yo-hahn-ness-burg
Nobel	No-bel
Palenquin	Pal-an-keen
Salamanca	Sal-ah-man-kah

CATS AND RATS IN THE
DARK

Can They See?

A Durham miner friend challenges a C.N. statement that cats cannot see in the dark.

You will admit (he says) that without our lights there is absolute darkness down our pits. Cats are kept in the pits to protect the horse corn in the stables from rats.

Yet I have seen a cat a mile away from the stables in the dark. That cat, a dark grey one, often stayed away from the stables for a week, and when it came back was quite wild. Evidently it lived on rats while it was away, for it was seen eating one.

There is not a miner in a rat-infested mine who is not certain that rats can see in the dark. They are most numerous where there is water. In such places the mud is often inches deep, but the rats are always clean. If they are frightened and rush away they will always find a clean place to gallop on.

THE NEW YPRES

Rebuilding the Ruined City

In a few years many of the signs of war's devastation in France and Flanders will have been removed. Ypres is being steadily rebuilt.

When the war ended five years ago nobody was living in Ypres, and the ruined houses numbered 3780. Before the war the population had been 18,050. At the end of 1919 the people who had returned were 2126. At the end of last September they numbered 13,053, and there were 3239 dwellings either completely rebuilt, rebuilding, or temporary, the temporary erections being 750.

The waterworks, sewers, and lighting works have been fully restored. Many of the ancient buildings have been, or are being, reconstructed—as far as possible—from their old materials, including the most venerable of the churches; and before long a new Ypres, as much like the old town as it can be made, will have risen from the ruins.

CAN THE LEAGUE SAVE
HUNGARY?

And Why Not Europe?

The financial reconstruction of Austria by the League of Nations has proved a success in the first year of its working.

The deposits in banks and savings banks have increased from two million gold crowns to 32 million crowns. The monthly deficit of the Austrian Government has decreased from 38 million crowns to 13 millions.

The unemployed receiving assistance have diminished by one half. The export trade has steadily increased in value, and the Austrian crown has remained stable in its value.

Hungary, seeing how greatly the assistance of the League of Nations has benefited Austria, has applied to the League for similar support, and a scheme suitable for Hungary is being considered by the Finance Committee of the League.

There has never been a better illustration of the way in which international friendliness and cooperation may help a distressed nation along the pathway of progress. If Austria, why not Hungary? If Hungary, why not Europe?

ARTIST UNDERSEA

Pictures of Coral Gardens

The fine American Museum of Natural History in New York is exhibiting a novel collection of paintings of coral gardens on undersea coral reefs of the Pacific Islands.

The artist, Mr. Z. H. Pritchard, went down in a diver's suit and sketched the effects and colours on specially prepared canvases. It is said that the beauty of the colouring rivals that of the choicest landscapes.

The paintings illustrate the changes of colouring under the water according to the time of day and the conditions of the sky overhead.

The paintings will become a permanent part of the American Natural History Museum, in a section called the Hall of Ocean Life.

SMUGGLERS AND THE
FLAGBreaking Laws of a Friendly
Nation

A STRONG PROTEST

Many readers of the C.N. will be glad to read this protest from the Daily Mail against the use of the British Flag by the Drink smugglers into America.

The people of this country feel that the activity of the rum-runners in using British bases for huge smuggling operations ought to be checked. They regard the proceedings of these gentry, who are scarcely ever British subjects, as verging on the scandalous.

The profit of smuggling goes to the great American business organisation behind the rum-runners. The odium of it is placed on the British nation. It is a constant source of friction, and it ought to be removed. That there are difficulties to be overcome will readily be admitted. The Bahamas and Bermudas, British possessions which the American rum-runners have used as their bases, both enjoy a large measure of self-government. The Bahamas draw a considerable revenue from the customs dues on imported and exported liquor; and if that revenue disappeared taxation might have to be increased. But the Bahamas lie so near the United States, at a distance of only about 60 miles from the coast of that country, that their Legislative Assembly might not unreasonably be asked to enforce on the smuggling population some respect for international comity.

We do not want to see the British West Indies made the entrepôt of semi-piratical enterprise by international adventurers of the most distasteful type, who abuse the British flag and hospitality to break the laws of a friendly nation.

CHILDREN'S NEWSPAPER

DECEMBER 15 1923

Patriots All

SOME of the wisest and most necessary words spoken during the recent national outpouring of election speeches came from Sir Ian Hamilton. Sir Ian, standing for his country and for no party, protested with generous warmth against the very common way that parties have of calling other parties unpatriotic.

The C.N. agrees with Sir Ian Hamilton that this unhappy practice should be stopped, for, no matter what party the charge is made against, it is untrue. There is no such thing in this country as an unpatriotic political party.

The heat of the election contest has now died down sufficiently, let us hope, for members of all parties to acknowledge, in the quietness of their minds, that Sir Ian Hamilton was right. The very political fervour that makes men say, in their anger, that those with whom they disagree are unpatriotic, comes from the fact that they are all patriotic.

Some may be ignorant, honestly deceived, blind with passion, believers of what is untrue, and heading towards ruinous disaster, but, except in the rarest instances, they are not unpatriotic. They may be mistaken and wrong, but to the best of their knowledge, capacity, and intention, they mean well for their country.

Politics will be all the better for grown-ups now, and all the better for us when we grow up, if we realise that, in sober truth, we are all earnestly anxious to find out the best ways of benefiting the people of our country. In our heart of hearts that is what all our British people are doing.

On that belief the sturdy common sense of the British mind rests, and the actions of the country are kept steady. As long as that is so, as long as all mean well, there will come out of the clash of opinions that common sense which suits the national character so well, however it disappoints the few extremists who dearly want to have their way.

In this country the different classes have never hated each other. Class-hatred is a foreign growth on English soil, a weed, a parasite born of social conditions unlike our own and nurtured on theories that do not fit the facts of life or the facts of British character. We have believed in each other, understood each other, and we are really proud of each other; yes, even of those stupid fellows whom we fight so hard at election times. We know they are patriots, as we are, and that we shall keep on finding ways of agreement with them.

That is why our Little Treasure Island is what it is—a genuine democracy with everybody in it, no fragment of it ever having its way in the end by force.



THE EDITOR'S TABLE

Fleetway House, Farringdon Street, London
above the hidden waters of the ancient River
Fleet, the cradle of the Journalism of the world



The Little Shepherdess

HERE is a little story that comes to us from France.

A girl of twelve was tending sheep on the bare, peaked hills of Auvergne with a dog she had known only a day or two—a surly and suspicious dog.

As evening came on, and the little shepherdess thought of returning to the farm, the dog sprang at her and savagely gashed her cheek. The plucky little maid herded the sheep together and led them home, where she explained what had happened, and added: "What luck that it happened at turning-in time!"

As the doctor stitched up the wounded cheek he said: "So if the dog had bitten you earlier in the afternoon you would not have come back at once?"

The child looked up. "Who would have tended my sheep?" she said.

The Wonderful Escape

By Peter Puck

HAVE you read of some strong hero

Locked in dungeons and in cells,
Who escapes and slays his Nero,
And ends up with marriage bells?

O, the failure of the Prison
And the Gaoler with his knout
When the soul of man has risen
To the thrill of getting out!

Well, my little son of Freedom,
Know these stories all are true:
If you've got the sense to read them
Just as Parables of You.

Let Us Be Ourselves

JENNY had her cousin staying with her, and was struck by the fact that everybody thought Hilda amusing, and laughed at all she said and did. When Hilda had gone Jenny, too, tried to say amusing and clever things, to lift her eyebrows and look droll, but, to her surprise, nobody was amused as they had been when Hilda spoke. Jenny came home from a picnic in tears.

"I heard two ladies say I was pert and silly!" she sobbed to her mother. "They never said that of Hilda, and I was only copying her."

Mother smiled.

"Poor Jenny!" she said. "Don't you know that people are only nice when they are just themselves? Hilda was amusing because she was natural. Heaps of friends have said to me that they like you because you are thoughtful and kind-hearted. Hilda is amusing, but isn't it as good, or even better, to be kind-hearted?"

And, thinking it over, Jenny made up her mind that it was better to be a first-class Jenny than a second-class Hilda.

The Maker of England

Beyond doubt the Almighty Maker made this England, and has been, and for ever is, miraculously present here.

CARLYLE

Ring Out the Old

WHEN we hear anyone singing the praises of feudal times we may remind them of this terrible remark by Baron Stein, the Minister of Frederick William III:

The abode of the Mecklenburg noble who, instead of helping his peasants, hunts them seems to me like the lair of some beast of prey which devastates all around and encircles itself with the stillness of the grave.

We can thank our sturdy fathers that such beasts no longer prey on the English countryman.

Tip-Cat

VISITORS say that Londoners are always good to them. And sometimes good for nothing.

MISS M. LLOYD GEORGE says women are women the world over. Otherwise, of course, they would be something else.

AN observer wants to know why successful people grumble. Just because they have nothing to grumble about.

A READER inquires how to make fruit-trees grow. Try planting them.

SOME women live in their hats. Some talk through them.

AN M.P. thinks few words are needed to disclose the contents of the mind. Especially if the contents don't amount to much.

A CORRESPONDENT asks if Ireland is a rich country. We asked Peter Puck, and he declares that, at any rate, its capital is always Dublin.

PUBLICITY pays. Yet it has to be paid for.

MANY children are developing an ear for music. Pity they are unable to play the piano with it.

NEWSPAPER advertisement: Wanted, third foot-man. Then they'll have a yard.

Fads

JOURNALISTS, somebody writes, are always ready to laugh at the faddist. Not always—and, in any case, he laughs best who laughs last, and the faddist often does that.

People jeered at Jonas Hanway when he walked the streets with the first umbrella; they ridiculed the first bicycle; and we may depend upon it that the man who first used a knife and fork was looked on as a crank.

So that we should never despise anything because it is new and strange. Some of the most sensible habits of today were the fads of yesterday.

Two Men Look Back

TWICE we have been reminded in the last few days of the Thing we can never really forget—the war that broke the happiness of the world.

First we were to be reminded of it by the lines in Punch where one of the men who won the war is looking back, and talking. This is what he says:

I'm sickened, lookin' round today;
The world seems pretty well as mad,
Swords rattlin' in the same old way
And mailed fists shakin' just as bad;
It makes a feller half inclined
To envy those that sleep out there,
Who never guessed the rotten kind
O' disappointments we've to bear.
With hopes still bright they took their
call;
Were they the happiest, after all?

The second reminder was in this story, lying on our desk side by side with Punch's verses. It comes from a C.N. reader who found himself in the company of a man whose empty coat-sleeve told its own sad story, and who spoke of his experience as he might have told of a match on the fields of sport.

How It Happened

"Before we 'went over' the whole battle had been rehearsed, so perfect were our plans. We knew almost to a yard where the German barrage fire would come, and we tried to get beyond it at the first rush. My men were glorious, and I really felt brave; yes, brave. Mind you, I never funk'd it, but lying waiting at the bottom of those trenches did fairly sicken you."

Then he went on. "The men on our right were great, and so were our men; but on our left flank, somehow, things did not go quite right. There was a machine-gun there, and it was their job to silence it; but they didn't. What a target we must have made for that gunner! The thing must be silenced. I urged my men on and they were splendid, but it was a tough job."

He lit a cigarette.

"Well, that's how it happened."

"What happened?"

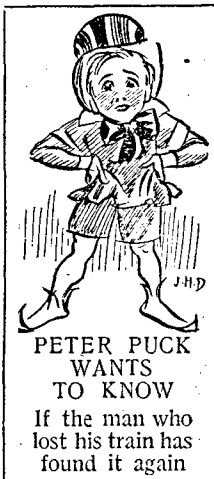
"Oh," he said, "I got shot, and it came out at the elbow. In a few hours," he continued, "I was in hospital, and off came my dear old arm. I had a cigarette. I felt really happy to be safe and in good hands, and I watched the operation as carefully as a student might have watched it. The doctor laughed, and so did I."

We Wonder

Wishing to change the conversation, our correspondent asked if he were in town on business, or taking a holiday.

"Well," he said, "it's like this; I've been sent to a new branch. I don't want to grouse, for I believe the country has treated me fairly and squarely; but I came here and—well, there's no need to bore you with all this, but, in a nutshell, I've been given to understand that a man with one arm isn't as good as a man with two."

Isn't he? We wonder. It may be possible there are people who think so, and yet we wonder, for we know men with two arms who are not worth half as much as this man with one.



December 15, 1923

The Children's Newspaper

7

POLAND AND HER TROUBLES

SPIRIT OF A PEOPLE

Working for the Greatness of the Fatherland

WAR AGAINST THE WORLD'S GREAT ENEMY

By Our Poland Correspondent

Poles are continually being asked by English people: "Why is Poland such a militarist country? Why do you keep such a big army?" It will be a great service to a much-abused nation if the C.N. will make known the actual facts about this matter.

The position of Poland is one of the worst of all the countries of Europe. Except in the south and part of the north, just where they are least needed, she has no natural frontiers, for in the east and west the line crosses the open plains with only the boundary stones to mark it, and beyond this line live Poland's most troublesome neighbours, Russia and Germany.

A Menace to Peace

Both these countries, owing to their internal disturbances and unrest, are a menace to Poland's peace. The eastern frontier is being continually violated by bandits, who come to rob Polish villages or try to raise robber bands among the peasants. Bolsheviks in Russia as well as in Germany are continually sending secret agents into Poland to stir up trouble in the country that stands there between them and prevents them from uniting their forces.

It is true that the upkeep of an army needs not only the money but the brains which could otherwise be used for the reconstruction of the country, but how can you do spring-cleaning in your home when, on both sides of it, your neighbours' houses are on fire? You will leave the dust in your parlour and must fetch buckets of water to save your roof. That is Poland's position today.

Great National School

Besides safeguarding the peace of the country, the Polish army is a school for all the men who join it. They have regular lessons in arithmetic, history, geography, physics, chemistry, and so on; and also lessons in reading and writing for those who never had the chance of learning before.

This is one of the ways in which Poland is dealing with her illiterate population. Before the war, Russia had the greater part of Poland under her rule, and her policy was to keep the people ignorant. How dangerous this was we now see in Russia, where Bolshevism never would have had a chance to take root but for the utter ignorance of the people.

Fighting Against Ignorance

Now Poland is fighting hard against the world's greatest enemy—Ignorance. Enormous sums are being spent on education, and during the last few years thousands of schools have been opened. Of course, it is difficult to provide enough teachers, and many of them are now doing the work of two or three.

I met the other day a young village teacher who has 150 children in her class. "I take them in groups at different hours (she said), and I am teaching from eight o'clock in the morning till six in the evening, with a break for lunch. When I come home I correct all their exercise books."

I looked at her pale, thin face and said: "But it is too much work for one teacher." "Yes (said she), it is too much, but how can we get more teachers? The children must learn. It will be better in the future, and what does it matter if I give up little pleasures

NEWS FROM EVERYWHERE

Japan has purchased the entire Californian rice crop.

The huge Washington monument in America is to be used as the shadow-caster of the largest sun-dial in the world.

Foreigners in Paris

About 300 permits to reside in Paris are applied for every day. The number of foreigners in the French capital is now about 400,000.

The Motor Track at Brooklands

Residents in the neighbourhood of Brooklands motor-track are complaining that the noise from the track makes rest impossible, even when windows and doors are closed.

James Watt's Room

Heathfield Hall, Birmingham, the old home of James Watt, the pioneer of the steam-engine, has been bought as part of a garden city. The room in which Watt worked is still as he left it.

The world's production of salt is now 19 million tons a year.

A monument to dogs that died in the war has been unveiled at Hartsdale, New York.

A Gun Refused

The Rangoon Corporation has refused the offer of the Government of India to present it with a gun captured from the Turks.

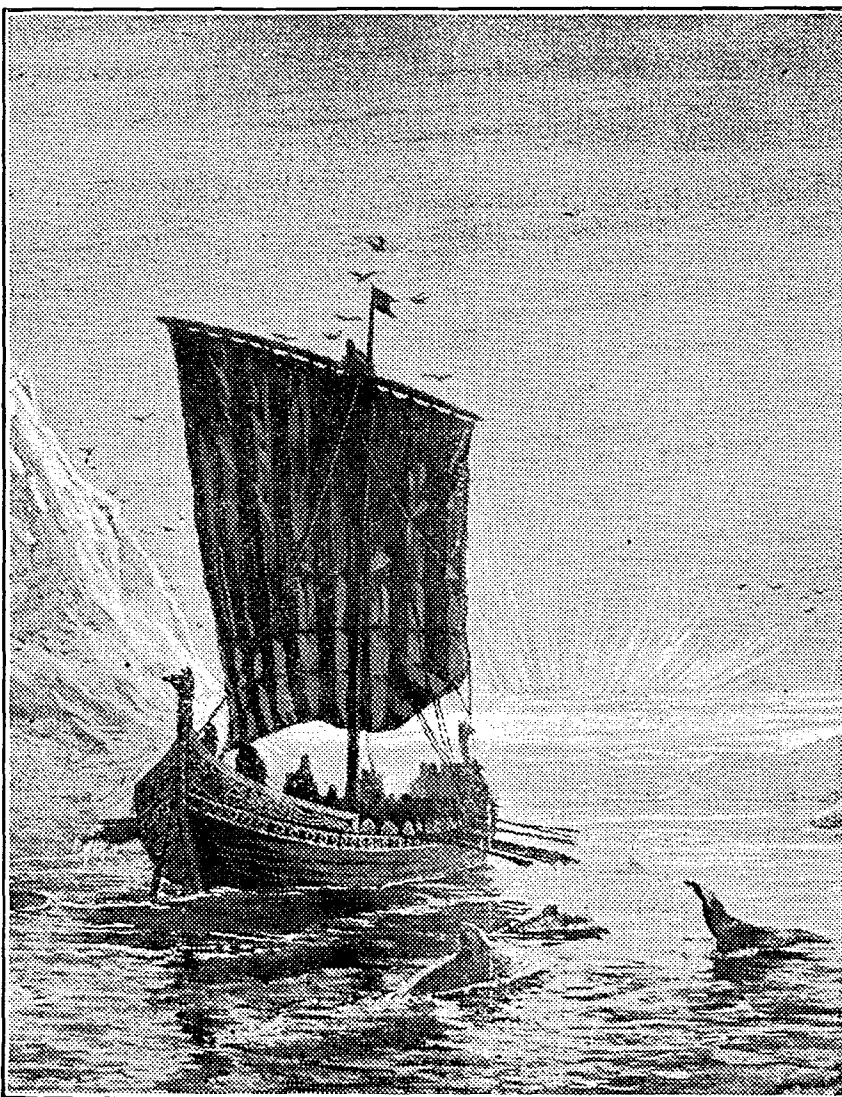
Norway Remembers its Sailors

A monument is to be set up on the west coast of Norway in memory of Norwegian sailors lost in the war. It will be in the form of a pyramid, with a light shining from the apex.

The Man and the Cart

A Skegness man visited Boston, in Lincolnshire, the other day, bought a four-wheeled dray, took it to the station, considered the railway charges unreasonable, and pulled the vehicle all the way to Skegness, a distance of 24 miles.

EXPLORING 900 YEARS AGO



Over 900 years ago the Viking seaman, Eric the Red, discovered Greenland and founded a flourishing Norwegian colony there. In the Middle Ages the colony mysteriously disappeared; and it is said to be not impossible that a great American airship, which is to fly over the Pole next year, may discover their descendants still living on some island at present unknown. - See page one

Continued from the previous column

now? We are building the new Poland." You will find the same thing in the workshop, in the factories, in big institutions and small ones. Everywhere are to be found people hard at work, one doing the work of two.

Crossing the Polish plain, as the train goes to Warsaw, the traveller can hardly believe it is only two years since the Bolshevik invasion, when the country was laid in utter ruin. There is no waste land to be seen, even the poorest sandy soil is made to yield some crop. The silent factories of Lodz are busy again turning out beautiful woollen and cotton goods that can compete with those of any other country. They produce more than before the war. Goods from Lodz and Poznan are bought even in Brazil and the United States. Fresh industries are springing up, based largely on the timber resources of Poland. Also, the coal mines are doing well. Polish exports now exceed the imports, and the country is

completely self-supporting. There is intense activity wherever you go.

The people do not count the hours of work; they do it for Poland. In this lies Poland's greatest hope, in the hard and strenuous work of these people, which will surely succeed where politics have surely failed.

AN EDUCATION IDEA

Convict Correspondence School

An American ex-convict has opened up a correspondence school for convicts in State prisons who wish to improve their minds.

This man, himself a college graduate, developed the idea while in gaol, and has now obtained special parole and an allowance of £50 a month from the State authorities in order to carry on his work. Prison authorities all over the country are giving him assistance, and excellent results are looked for.

SAVING THE WHALE

GIANT ANIMAL THAT MAY BECOME EXTINCT

Antarctic Expedition to Study Its Ways

TRACING THE TRAVELS OF A SEA MONSTER

So many whales have been caught in the Arctic seas in recent years that there are hardly any left.

When their numbers became very small, the attention of whalers was turned to the South Seas, and the hunting of these monsters began in earnest near the Falkland Islands, where the sea narrows down, and, in consequence, the whales are more congested and easier to catch.

There is a great danger now of hunting too many whales, a danger that the whales of the South will, like those of the North, become almost extinct, and thus it is that an expedition is to be sent out, at the request of the Government of the Falkland Islands, to try and learn as much as possible of the habits of the whales, how long they live and how long they take to grow, and whether any of those in the Antarctic migrated from the Arctic, and so on.

A Whale's Growth

Captain Scott's famous ship the Discovery is now being equipped, under the direction of Sir Sidney Harmer, for this new whaling expedition.

Mother whales, a hundred feet long, are often found accompanied by their babies, forty feet long. How long does it take the baby to grow to maturity, and how long do the parents live? It is thought the whale grows very quickly, and that probably in six months a twenty-foot new-born whale will reach forty feet.

All these facts are very important in order to study the question of how many whales it is safe to hunt in a year, so that the supply may be kept up. In some recent years ten thousand have been caught.

Storehouses of Wealth

A big whale may be worth quite £3000 to the hunters, so rich is its huge body in oils, fats, whalebone, and other useful commodities. In fact, the whale's body is a vast storehouse, enclosed in a skin so thin that it is impossible to stuff it. All the specimen whales brought back by the Discovery will be kept in the form of skeletons in the new whale house it is hoped to build at South Kensington. In many cases the skulls only will be mounted, as they show the most distinctive differences. The skull of a full-grown whale is twenty feet long.

One of the most interesting studies to be made will be that of the whale's food. Most of its food consists of tiny shellfish, much of almost microscopic size, which is filtered out by the huge dredging apparatus of the mouth.

Marking the Whales

The whale seems to swim around in quite local parts of the ocean where its pet foods are readily available; its search for tasty morsels will be followed with great care by the expedition.

Whales will be marked where possible, so that their life-history may be traced. Perhaps a whale of the Southern Seas will be caught some day in the Arctic Seas off Iceland; then we shall know that the monster animals swim the whole length of the world. Whether they do so is not at present known, nor is it known whether the southern mammals are the same family as the northern, or whether distinct families grow at the two Poles of the Earth.

A BATTLE WORTH FIGHTING

MANKIND AGAINST THE CATTLE TICK

A Terrible Little Creature and the Work it Does

SCIENCE WINNING

Mankind keeps and improves its place in the world by continual fighting. There is no doubt about that.

Of course, we do not mean men fighting men. That is the most insane and wicked thing they can do. But battles of other kinds are always being needed—battles against disease, want, and unhappiness; and for health, plenty, and clean and invigorating joy.

A splendid specimen of the battle of mankind against want is now being fought in the United States, and we should all know about it and rejoice that it is being steadily won.

The enemy is the cattle-fever tick—a little biting and burrowing bug that has much the same effect on cattle as the malaria mosquito has on the human body. The scientific name of this vicious little pest is *Margaropus annulatus*.

Thousands of Eggs

This is how the fever tick carries on its part of the battle. The female tick, a little brown bug, clings to the legs of cattle, climbs up to where it can get a good bite, then buries its head in the hide and takes a long drink of blood, infecting the animal with fever.

When the tick has filled itself with blood it drops to the ground, and there lays eggs by the thousand. After that its day is done, and it shrivels up and dies. But its thousands of eggs hatch out as young ticks, climb up the grass stalks, and wait for an animal to come walking through the grass. When that happens they cling to the animal's legs and hurry up them for a bite. Any animal will do, but it is only cattle to which the tick gives a fever.

To the cattle, and the people who own them, the fever is a very serious thing. About one out of seven of the infected cows die, and the others become thin, give less milk, are lifeless and miserable, and have their hides bored with holes.

Tick Marches Northward

So great are the ravages caused by this little pest that the Governments of the separate States into which it has penetrated have had to join in the struggle against it. The tick marches from the south northward by clinging to animals, fodder, wagons, or anything that is moving. The first defence is to draw a line across the map, and not allow any animals to cross the "tick line" from where there are ticks to where there are none. The next defence is to cure all the cattle in the tick areas.

It can be done. Twenty arsenic baths will kill the ticks. So baths for cattle, narrow and deep enough for the cattle to swim in, are made so that there is a bath of water, strongly impregnated with arsenic, within five miles of every ranch or farm; and all the herds have to swim through the tick-bath once a fortnight, till every animal is cured.

Freeing a Country of a Pest

The tick-bath has been successful wherever it has been tried thoroughly. In 1906 the tick area covered 728,565 square miles; in 1922 it had been reduced to 210,393 square miles. Why, then, cannot the whole country be freed?

One answer is that Mexico leaves the tick alone, so it has to be wire-fenced off from the States. Another answer is that in some parts, such as Florida, there are swamps where the tick has never been tackled. And a third most curious answer is that in the United States the trouble and expense of arsenic baths have led to strong opposition from the ranchers, who will not believe that the results justify the cost and trouble.

Nevertheless, the battle is being won all along the line by science.

A BEACON FOR THE FISH

How the French Boats Fill Their Nets

A WATERTIGHT LANTERN

On the south shores of France, on one of those fine, quiet nights when not the tiniest breeze ripples the surface of the waters, it is not rare to see a fishing boat start off carrying at its prow an iron grate with coal burning in it.

The object of this luminous furnace, with its rays diving into the water, is to attract the fish, so that fishermen, lying in wait in the shadow, have only to harpoon them.

Recently two French naturalists invented a lamp for their scientific sea researches, and this new lamp, designed to draw thousands of water animalcules by its glitter, is now taking the place of the duller coal furnace in night fishing.

The new lamp is fitted with a watertight lantern half a yard high, supported by a buoy two feet in diameter. The lantern is surmounted with an acetylene generator connected by a tube with a burner set at the bottom. Two fishing boats joined together by a net may thus surround the space above which the lantern is drifting, and lessen their circle and capture the attracted fish.

IS THE ALLIGATOR DYING OUT?

How Its Skin is being Used for Commerce

We do not find many kind words said about the crocodile or the alligator; in fact, the Americans used to say that the only good alligator was a dead one.

They have carried the persecution of the Mississippi alligator to such an extent, mainly because the soft skin of the sides of the body makes such a durable ornamental leather, that they have nearly exterminated it.

Now they are beginning to be sorry for it, because they are finding that it is always dangerous to upset the balance of Nature.

According to Mr. R. I. Pocock, the lessening of the number of alligators in some of the swamps of the Southern States has been followed by a great increase in the numbers of moccasin snakes, poisonous, swamp-loving species on which the alligators feed. In another district there was a similar increase in the numbers of the musk rats, which are aquatic and a great pest to the farmers.

It is not likely, however, that alligators or crocodiles will be "preserved" at present. In British Central Africa they are such a pest that the Government offered rewards for their eggs, until the numbers returned made the cost too great.

EVEREST WEATHER

White Mantle That Vanished

Some of the weather observations gathered by the Mount Everest expedition at great heights in the Himalayas have been lately made known, and very astonishing they are.

The most interesting facts obtained were in connection with the disappearance of snow in these remote regions. Usually we think of snow as melting, and then, when it has changed into the liquid form, evaporating and passing off unseen into the atmosphere.

But the snow on Mount Everest does not do this. It simply evaporates without any preliminary melting.

Dr. T. G. Longstaff says: "Owing to the extreme dryness evaporation is incredibly rapid. Above 25,000 feet snow does not melt, but literally evaporates into the thin air. The party camped in a blizzard at 15,000 feet on April 8, but next morning the snow soon disappeared. They awoke at the base camp at an altitude of 16,500 feet on June 4, to find a covering of four inches of snow; by ten o'clock the ground was dusty. Probably the constant high winds greatly assist this phase."

NEW WAY TO GET OIL

DYNAMITING THE SHALE UNDERGROUND

How the World's Supplies are Being Increased

BOILING THE CRUDE PETROLEUM

The bulk of the mineral oil used today is pumped out of the Earth, or gushes up from pockets deep down under the soil, and when refined it is ready for use.

But these easily accessible liquid supplies are fast being used up, and one day, if men still require oil for driving their motor-cars and ships and engines, they will have to obtain it from oil-bearing shale, which is found in Britain and many countries, but chiefly in the Rocky Mountains.

It is in anticipation of this time that many engineers and men of science have been directing their attention to the problem of how to extract the oil from shale with a minimum of expense.

Pumping Steam Underground

A new method has just been invented by two New York engineers, Mr. Wilson Hoover and Mr. Thomas E. Brown. Their plan is first of all to break up the shale by dynamiting it while still below the surface, and then, by passing steam through the broken rock, to vaporise the oil and pipe it to the surface.

The steam will pass down to the shale through a pipe, at the bottom of which it will be allowed to escape, and when the volatilised oil reaches the surface it will be condensed in a plant by machinery at very small cost.

This method has already been tried with sulphur, and has proved such a success that in America it is in general use for tapping the large sulphur deposits of Louisiana and Texas. Formerly the United States imported the sulphur she needed, but now, thanks to this process, she will be able to supply all her own needs and export large quantities.

Shattering the Rock

In mining the oil shale by the Hoover-Brown process a number of deep holes are bored down to the shale, dynamite cartridges are inserted and fired, and the rock is shattered to within about a hundred feet of the surface. Most of the holes are then sealed up, but one is left for pumping down the steam, and one for drawing off the vaporised oil.

A new method of purifying the crude oil as it comes from the Earth, which is now being used, seems likely to increase the world's supplies of motor spirit to a large extent.

When crude oil is distilled it is split up into various grades of spirit and oil, the spirit distilling off first. When all the spirit is driven off, lighting oil or paraffin distils next, then heavier oil suitable for oil engines, then thick lubricating oils.

Purifying the Oil

In fact, the only difference between the various grades is their boiling-point and thickness, or viscosity.

By boiling the crude petroleum with aluminium chloride not only is the oil purified and freed from sulphur, but it has been found that much of the heavier oil is "cracked" and converted into the far more valuable light motor spirits and lamp oils.

Month by month we hear of new improvements in the oil world, and any process that will increase the yield of light oils and motor spirit is of world-wide importance.

In the Auction Rooms

The following prices have lately been paid in the auction rooms for objects of interest.

MS. of Scott's Redgauntlet . . .	£520
Autograph letter of Robert Burns . . .	£492
Shakespeare second folio, 1632 . . .	£355
20 drawings by Rowlandson . . .	£185
Ten pages by R. L. Stevenson . . .	£185
Queen Anne inlaid cabinet . . .	£94
Etching by Whistler . . .	£56
Gold Salamanca medal . . .	£52
Colchester Siege shilling piece . . .	£14

GIFTS FOR BOYS AND GIRLS

CHRISTMAS BOOKS THAT CHARM AND CHEER

Entertainment and Adventure

FUN FOR ALL

With Christmas nearly upon us there are two very important questions always cropping up—What are the best presents to give to our friends, and what pleasant surprises shall we find when we open our eyes on Christmas morning?

There are many things we may be looking forward to, and where most of us are concerned there is, at least, one thing certain to give lasting satisfaction: a book.

This year the selection of Christmas gift books is splendidly varied, for there are attractive Annuals in the bookshops to suit boys and girls of every age.

Old friends like Tiger Tim and the Bruin Boys will be found in The Playbox and Tiger Tim's Annuals, books that have always been popular with our younger readers. The Playbox Annual is one of the oldest picture story-books on the market, and this year the famous volume is fuller of fun than ever.

A Jolly Afternoon

These two books, together with Wonderland and Puck Annuals, are remarkable for the wealth of pictures they contain, and readers of Playtime and Puck will find Wonderland and Puck Annuals specially attractive.

It is difficult to imagine a more jolly way of spending a long winter afternoon, when it is too wet to go out, than in following the funny pranks of the lively little people who live in these Annuals. Jokes, puzzles, riddles, games, and other entertaining things all combine to turn dullness into brightness.

For boys and girls who love the thrill of adventure Annuals like the Champion, the Holiday Annual, and the Schoolgirls' Own will appeal very strongly. They are packed with enthralling stories, all illustrated with splendid pictures and coloured plates.

Old Favourites

The Champion Annual makes its first appearance this year, and is a wonderland of exciting adventure both in distant parts of the Earth and at home. For those who appreciate a tale which runs breathlessly from start to finish the Champion provides just the fare they love.

Two old favourites, the Holiday Annual and the Schoolgirls' Own Annual, are back again with better school and adventure stories than ever. They are not only story-books, for among the splendid stories will be found hobbies, games, and things to make and do.

From cover to cover these Annuals are a mine of fun and entertainment, with many fine plates in full colours. Strongly bound in boards with cloth backs, and printed on first-class paper which is not easily torn, they are ideal gift books for Christmas. They cost 6s. each, and are on sale everywhere.

THINGS GETTING BETTER

Russia Can Carry Letters Now

There has been a quickening of the postal service between the British Islands and China and Japan by way of Siberia.

Before the war a letter could reach Shanghai by Siberia in 17 days. The turmoils in Siberia and Russia after the war made this most direct line practically unusable; but the service has been improving steadily, and letters are now reaching Shanghai by that route in 23 or 24 days, or about a week longer than in pre-war times.

THE WEEK IN GEOGRAPHY

STRASBOURG

THE GREAT INLAND PORT OF CENTRAL EUROPE

Strasbourg, which for centuries was a German city, and then for nearly two hundred years was held by the French, became German again in 1871, and finally passed to the French after the Great War.

Now the French are spending about two and a half million pounds in making the city the greatest inland port in Central Europe. It is admirably situated for this purpose, because its position near the borders of three countries—France, Germany, and Switzerland—makes it a very convenient centre for commerce.

The city stands at the junction of the rivers Breusch and Ill, about two miles from the Rhine, and canals connect it with the Rhine, the Rhone, and the Marne. It is a great railway centre, and owing to its strategic importance has always been a much-coveted possession.

Improving an Old City

After the Germans took the city in 1871 they did a great deal to improve it as a commercial centre; and now the French, anxious to show that it will be still better developed under French rule than under German, are carrying out further great improvements.

The developments include the building of five new docks at various points, new canals, and new entrances. Existing canals are to be widened, new roads made, and a new rail-distributing station constructed. The work is all well in hand, and when it is completed in about five years' time Strasbourg will have 23,000 yards of wharves, and will probably be the finest inland port in Europe.

The city is an ancient one, dating back to the times of the Caesars, when it was called Argentoratum. There Julian defeated the Alemanni in 357, but later the Germans took it, and after various ups and downs it was, in 1262, made a free city of the Holy Roman Empire. During the next century its trade guilds obtained a large share in its government.

An Amazing Clock

Fine buildings grew up, including the famous cathedral, begun in the twelfth century and not finished till the fifteenth. Its open stonework spire towers to a height of over 460 feet, and the nave is 100 feet high. The medieval glass is gorgeous in colour, and is among the finest to be found in the world.

One of the most remarkable features of the cathedral is the great astronomical clock, about which all sorts of romantic stories are told. This is about twenty feet high, and is an ancient clock reconstructed in the nineteenth century.

The rising and setting of the Sun are shown, and also the passage over the meridian of Strasbourg of all stars visible to the naked eye there. There is a calendar which shows not only ordinary dates, but also feast days; and the clock indicates solar and sidereal time and the days of the week and month, while a planetarium shows the movements of the planets.

Old and New Buildings

In addition, there are all kinds of figures that perform actions, one turning an hour glass with sand every hour, others striking bells, others making the sign of the Cross, and so on. At noon the twelve apostles march in procession and a cock flaps its wings, ruffles its neck feathers, and crows three times.

The university, an ancient one reorganised, is housed in fine new buildings, the old building, once an episcopal palace, now being used as a museum.

Strasbourg has many important manufactures, its products including locomotives, chemicals, and leather. Printing is also a very important industry.

The present population is 179,000, but, when the port is still further developed, no doubt there will be a great increase in the number of inhabitants.

MARVELS OF THE BODY

Battlegrounds Between the Forces of Good and Ill

SOME MYSTERIES AND PROBLEMS

Boys groaning over the arduous of the winter term may find consolation in the assurance of Dr. William Hunter that the medical student of today has to acquire, in every department of his studies, ten times as much knowledge as was the case 20 years ago.

How is such a condition of affairs cheerfully to be borne? Because, says the lecturer, of the great romance of these studies.

A series of remarkable advances in every field of physiology has revealed new facts in regard to the functions of the body. These advances show the great part played by internal secretions of practically all the internal organs and tissues in determining the growth and activity of the body.

Various ductless glands, whose purpose was until recently a mystery to us, produce secretions of the most vital character, and their absence produces in some cases strange forms of disease. They cause human beings to remain dwarfs or to become giants; they restrict some sufferers to a continuous state of seeming infancy, make idiots of others, and in others bring on some dread malady like diabetes.

Unknown Forces

Like the unknown forces behind wireless telegraphy, these internal secretions—or hormones, as they are called—permeate the whole bodily organism, "tissues calling to one another like deep unto deep."

Why so many should be born with these mysterious glands imperfect, and born, therefore, doomed to misery which only the newest science can relieve, is a deep and perplexing problem.

It is known now, as Dr. Dixon, of Cambridge University, has just been telling us, that the body elaborates its own drugs, stores them, and doles them out to the tissues as required. One of the functions of the nerve system is to localise the liberation of the drugs in definite places.

But sometimes, as we see, something cuts off the supply of these self-made drugs. Our bodies are battlegrounds between the forces of good and ill. The tendency of life is to continue; the attempt of the forces for evil within us is to bring us in ruin to the grave.

WHEN A CROWD BECOMES EXCITED

What the Builder Must Prepare For

Investigations that have been made into the stresses set up by the movements of crowds have shown that when a crowd is excited it weighs much more than when it is quietly seated, so far as pressure on the floor is concerned.

This fact has to be taken into consideration by engineers when they are building grandstands and tiers of seats.

During recent tests a man was placed on the platforms of a scale in a sitting position, and was then told to get up. As he did so the scale showed that his weight, or rather the pressure on the platform, had increased by 67 per cent. In another test a man, getting up from a chair, added 79 per cent to his weight, while when he rose suddenly from a couch and brought his arm down he momentarily added 174 per cent to his weight.

It was found also that men thus rising suddenly exerted not only an added downward force, but a horizontal force, too. It can be understood, therefore, how necessary it is to allow for the excited movements of the spectators when building stands for football crowds.

C.N. QUESTION BOX

All questions must be asked on postcards; one question on each card, with name and address. The Editor regrets that it is not possible to answer all the questions sent in.

What Colour is the Blood while in Our Bodies?

The blood in our arteries is bright scarlet and that in our veins dark purplish blue.

What is a Tariff?

A schedule of duties to be paid on imports, or goods coming into the country from abroad.

Could a House Have Every One of its Four Sides Facing North?

Yes; if it were built on the South Pole every side of it would face north.

How Far Away is the Pole Star?

About 44 light years, a light year being 5,876,068,880,000 miles, the distance light travels in a year.

What is the Maison Carrée?

A celebrated Roman ruin at Nîmes, in Southern France. It is a beautiful temple, 45 feet by 85 feet, but its date is uncertain.

Where Does the Rook Spend the Night in Winter?

Rooks go off together to some sheltered spot, such as a wood or coppice, when night falls in winter.

How should Eisteddfod be pronounced?

The Oxford Dictionary gives the pronunciation as æst'ed'vōd, which may be more simply put thus: ayst-ed-vohd.

What does Cedant Artibus Arma mean?

This is a Latin proverbial phrase, meaning Let arms give way to arts, or, as we should say, Let the art of war give way to the arts of peace.

What is the Ring, and Who was its Composer?

The Ring of the Nibelung is a sequence of four musical dramas by Wagner, and comprises Das Rheingold, Die Walküre, Siegfried, and Götterdämmerung.

What are the Doldrums?

Parts of the ocean near the Equator where calms prevail. The origin of the name is not certain, but it is believed to be a word made up from dull, similar in form to the word tantrums.

Why Were Nelson and Wellington Buried in St. Paul's?

St. Paul's Cathedral has come to be a recognised burial place for distinguished warriors, just as Westminster Abbey has for poets and statesmen.

Which Religions Have the Most Followers?

There are now estimated to be 566,201,000 nominal Christians in the world, 301,155,000 Confucianists, 219,030,000 Mohammedans, 210,400,000 Hindus, 136,325,000 Animists, and 135,161,000 Buddhists.

What Generals Have Led Armies Over the Alps?

Hannibal did this in 218 B.C., and Napoleon in 1800; but, in addition, Roman armies several times crossed the Alps, including those led by Julius Caesar and by Marius.

Which Way Does the Earth Rotate?

From west to east; that is, in rotating, England turns towards the Sun before America. If we were standing at some outside point of space, the Earth would appear to be rotating from left to right.

What is the Monkey Nut?

It is the fruit of a trailing plant of the leguminous, or pea, family, and consists of a brittle pod containing usually two seeds, ripened underground. It is also called the peanut, ground nut, earth nut, ground pea, and goober. It is grown in Europe, China, Japan, and North America.

How Did Drake Singe the King of Spain's Beard?

In 1587, when Philip II had gathered many ships for the invasion of England, Drake went to Cadiz and destroyed eighty of them, and then to Cape St. Vincent and demolished a hundred more. Having gone so near to the king in his own country, he playfully described his action as "singeing the King of Spain's beard."

What are the Chiltern Hundreds?

A member of the House of Commons cannot resign his seat, but by accepting an office under the Crown his seat legally becomes vacant. Therefore, when an M.P. wishes to resign he is appointed Steward of the Chiltern Hundreds, an old office with no duties, and is thus set free.

On What Should Young Goldfinches be Fed?

When wild their food consists of small seeds, such as lettuce, goat's beard, and so on. In captivity they are generally fed on poppy and hemp seed, varied with lettuce, rape, and canary seed. They must have green food occasionally, such as chickweed, watercress, and lettuce.

THE WONDER STAR OF ORION

GLORIOUS FAMILY OF BLAZING SUNS

Shining Points in a Whirl of Nebulous Light

ATMOSPHERE OF FIRE-MIST

By Our Astronomical Correspondent

Were we to wake up one morning and find four suns in the place of our solitary Sun, we should be much surprised.

Something of the kind happened to astronomers when they first saw Theta in Orion through the early telescopes. Previously known as a humble, fourth-magnitude star, they found, when seen more clearly, not one, but four stars. Later on, further increase of optical power added another sun; and still later Sir John Herschel found one more in 1830.

These are now known to be a family of glorious, radiant suns, resembling a blazing solar system of colossal dimensions, at a temperature far exceeding anything known in our Sun.

Last week's C.N. map shows the exact position of Theta in Orion, the name by which this wonderful stellar group is



Theta in Orion through a big telescope. The four brighter stars form the Trapezium

known. It is the central star of the three which hang almost in a straight line from below the middle star of the Belt, and are known as the Sword Scabbard of Orion.

Even opera glasses will reveal these stars as objects of great beauty, and instead of but three upwards of forty stars will be seen on a clear, dark night, many immersed in the wondrous whirl of nebulous light described last week.

But the marvellous Theta will need a telescope with a lens almost three inches in diameter to show it divided into four stars. Their magnitudes are 6, 7, 7½, and 8 respectively, and constitute what is known as the Trapezium. The fifth star may be seen with a four or five inch lens, but the sixth requires a larger telescope, when the scene presented becomes one of exceptional grandeur. But a seventh sun has been discovered within the Trapezium by the 36 inch lens at Lick Observatory, and Prof. Barnard found a still fainter one.

The Envelope of Helium

Though these require giant telescopes to be seen, they are all immense suns, far exceeding ours in size, and emitting proportionally far more light and heat; they are, in fact, the most luminous and hottest type of sun known, each being probably entirely gaseous.

These are enclosed in a dense envelope of helium—an atmosphere, as it were, of fire-mist, which extends in a more and more rarefied condition far into outer space, becoming ultimately so attenuated as to form the immense nebula which we can all see on a very dark night. Thus, in that vast region of the universe, such a thing as empty space, or a void, can hardly be said to exist.

The nebula may be excellently observed in a small telescope, where it will be seen to resemble the head of some marine monster. It has been found that both the nebula and the suns are at practically the same distance. Professor W. H. Pickering calculated its distance, and found it to be about 1600 light years away. What must be the colossal grandeur of this system of multiple suns, which appears so bright at this immense distance!

G. F. M.

Other Worlds. In the evening Venus is in the south-west; Uranus is due south about 6 p.m. In the morning Mars, Jupiter, and Saturn are visible up to an hour before sunrise.

THE ROGUE WHALE

A Thrilling Story of
Two Boys at Sea

Told by T. C. Bridges
the C.N. Storyteller

CHAPTER 25

Trouble Comes

THE loss of their ship and their uncle was such a blow to the two boys that for a time they had no thought to spare even for Blaskett.

The twins had adored their Uncle Nat, who had been more than a father to them ever since they could remember.

It seemed impossible to believe that they would never see him again or hear his cheery voice. For the next day or two they moped about, saying very little, and looking so desperately unhappy that both Mr. Crale and Jupe were sorry for them.

"It's sure hit dem bad, Marse Crale," said Jupe, as he watched the two sauntering slowly across the beach, side by side. "Ah guess we got to try and rouse dem up some ways."

"They'll get roused up before long, Jupe," answered the mate gravely. "If I'm not very badly mistaken, there's all kinds of trouble brewing."

"Yo' mean dat Blaskett," assented Jupe.

"Yes; it's Blaskett I am afraid of," replied Mr. Crale. "I fear there is no doubt but that he is planning mischief. He has been spending hours alone with Naga."

Jupe nodded sagely. "Yes, sah, and ef yo' asks me he's a-planning to get dat dere gold."

"Of course he is. And Burton tells me that the gold, if it exists at all, is on Karum's side of the island."

"Den dat means war, sah."

"Just so. Chad Burton told me last night that preparations are on foot already and that Naga is making ready to send an expedition against his old enemy."

"Den I reckon dey'll want us to help?" said Jupe.

"That is a certainty," replied Mr. Crale, with a shrug of his shoulders.

"And are yo' going to help, boss?"

"Most certainly not," answered the mate curtly.

Jupe mopped his face with a coloured handkerchief. The heat was awful.

"Den we got to get away somehow," he said at last.

"Just so, but the question is how. Naga suspects us and we are watched all day. Even at night some of his men are always near our hut."

"It's a mighty bad job," said Jupe slowly. "Ah reckon we better talk to de boys, boss."

As he spoke Kit and Col came hastily into the hut.

"Mr. Crale," began Col quickly. "Chad's just been telling us that we have to get ready for an expedition. That fellow Blaskett has persuaded Naga to tackle Karum's people. Of course it's the gold he's after. What are we going to do?"

"That is exactly what Jupe and I have been discussing, Col," said Mr. Crale. "One thing I am quite definite about, and that is that we are not going to help Blaskett in any of his abominable schemes. If it comes to that I would sooner use our harpoon gun against him and Naga."

"But they won't let us get near our gun or our boat unless we are with them," said Kit. "And Chad says that Blaskett and several of his men will be in our boat, and that they will put our two other men, Bliss and Horton, in one of their boats and hold them hostages. Blaskett has got the whole thing planned out."

Mr. Crale shook his head. "It's a bad look-out, boys," he said. "When do they talk of starting on this expedition?"

"Tomorrow morning," said Kit. "And will Burton go?"

"He doesn't want to, of course, but he's been at the beck and call

of Naga for so long that I expect he'll cave in and go."

"I reckon we got to get dat boat," said Jupe.

"We can't do that, Jupe," said Kit. "She's pulled right up on the beach, and watched all the time. Long before we could launch her we'd have the whole village about our ears. Our only chance is to take to the woods."

"And dat ain't a mighty fat chance either, Marse Kit. Yo' remember what come last time we tried dat."

Kit did not answer. No one seemed to have anything to say. They gazed at one another in an uncomfortable silence.

CHAPTER 26

Something Brewing

THERE was a long pause.

"We must tackle Chad," said Kit at last.

"That's not a bit of good," said his brother dolefully. "Chad's been living in this steaming island so long that his mind has sort of melted. Phew! Isn't it hot this evening?" he added, fanning himself with his cap. "I wonder if there's another earthquake brewing."

"Good thing if there was," said Kit. "It might give us our chance."

"Unfortunately these things never come at the right moment," said Mr. Crale drily. He got up as he spoke. "I am going to tell Bliss and Horton," he went on. "I don't suppose for a moment that they have any idea of what to do, but it is, as well they should know what is going on."

Bliss and Horton were the two A.B.'s who had completed the crew of the whaler. Quiet, well-conducted seamen, they had so far been content to take things as they came, but Mr. Crale knew that they would obey his orders, and that they were to be relied upon in any emergency. They had been given a little hut next to that in which Mr. Crale and the boys lived.

When Mr. Crale had gone Col turned to Jupe.

"Haven't you got anything to suggest, Jupe?" he asked. "There must be some way of getting out of this fix."

"Ef dere is ah can't see it, Marse Col," replied Jupe despondently. "And it's so mighty hot ah jest can't think straight."

"It certainly is hot," agreed Col. "And the sky looks queer out to seaward."

Jupe got up and looked out. He nodded.

"It suah does. Dere's something a-brewing."

"Perhaps it will come tomorrow and put the hat on this silly expedition," said Col hopefully.

"Den dey'll only go de next day," Jupe replied, and just then one of the island women who waited on them appeared carrying a calabash full of some sort of steaming stew and a platter with a quantity of fruit.

"I'm fed up with this stuff," growled Col. "Even a tin of bully beef would be a treat."

"Chad Burton, he's done lived on dis heah grub for fourteen years," said Jupe. "Yo' better eat while yo' can, Marse Col."

Mr. Crale came back and the four sat down to supper.

It was a gloomy meal, for not only were all four in bad spirits, but the heat was suffocating and seemed to be growing worse all the time. The air was so deathly still that every little ripple on the beach a hundred yards away sounded as if it were at their feet. The village itself was strangely silent.

Jupe got up and looked out again.

"I'd suah have said dere was a storm coming," he observed, "but de sky am still clear ober de sea."

"It may be a cyclone," said Mr.

Crale. "It's getting near the season for them. I wish we had a barometer."

"I guess the bottom would be dropping out of it," said Col. "A cyclone takes a long time to brew, doesn't it, sir?"

"Yes. It depends on which way it's coming. I've known one take forty-eight hours to work up," replied the mate. "But let us go outside. Perhaps it will be a little cooler."

There was precious little difference inside or out. The air seemed dead, and even the natives felt it.

The white men lay at full length on the beach, perspiration streaming from them. They all felt so limp that they could not talk, and hardly seemed to care what happened. There was no sign of Blaskett, and Chad Burton did not come near them.

The sky remained clear; at any rate the big southern stars were visible. A little sheet lightning played on the horizon, but that was a thing which happened almost every night.

At last Mr. Crale got up.

"We'd better get into the hut," he said. "It's not too safe to sleep in the open. It means fever, and we've got no quinine."

So rather reluctantly the boys followed him into the hut, and lay down on their grass mats. For a long time the boys turned and tossed restlessly. Then Col quieted down, and after a while Kit, too, dropped off to sleep.

How long he slept he did not know, but he dreamed that he was back in the whale boat, that they were fast to the rogue whale, and that the brute was coming for them with open mouth. It hit the boat with a mighty crash, and Kit woke with a fearful start, and the sound of the crash still in his ears.

The crash was real enough. It had been caused by the departure of the whole roof of the hut. The night was full of a deep, steady, sustained roar, and for a moment Kit could not imagine what had happened.

Then someone grabbed him by the arm.

"Kit, the storm!" came Col's voice out of the darkness. "Get out of this or the whole thing will be down on top of us."

CHAPTER 27

Shelter

QUITE what happened next Kit hardly knew, but somehow he and Col together managed to creep out of the ruins of the hut into the yelling darkness outside.

Next moment the wind caught them. Such a wind! It was like a solid wall. The air was full of sand and spray, indeed of great gouts of salt water ripped from the raving sea. The roar of it was

beyond conception. The noise stunned them so that they could hardly think.

"It's a tornado all right," said Col, with his mouth close to his brother's ear. "I say, where are the others?"

At that moment someone bumped right into the pair.

"Golly, who's dat?" gasped a hoarse voice.

"Kit and Col, Jupe," shouted back Kit. "Where's Mr. Crale?"

"I done got him right hyar," replied Jupe. "We ain't hurt neither of us—not yet, anyways. But say, dis suah is our chance to get away from dem natives."

"What, in this?" exclaimed Col, and just then a gust caught him and Kit and sent them flat on the ground.

"Doan't yo' try to get up," advised Jupe, who, in spite of his great strength, had also been felled by the appalling force of the gale.

"Jest creep after me. Dere's a big rock a little way off. Ef we kin get in behind dat ah reckon we kin get our breath."

It was wonderful how he found his way in the pitchy darkness; but find it he did, and presently they were all four in comparative safety under lee of a big outcrop of rock.

"Where are Bliss and Horton?" was Mr. Crale's first anxious question, and instantly came the reply in Horton's voice:

"Here, sir. We heard her coming, and Bliss and me thought of this here old stone and made straight for it."

"Then we are all safe," said Mr. Crale—he had to shout to make himself heard; any ordinary speech was lost in the elemental din which filled the earth and sky.

"There's Chad," put in Kit. "And Blaskett," added Col.

"I hope Burton is safe," answered Mr. Crale, "but as for Blaskett I have no desire for his company."

"Ah hope de wind's blowed him clean off de island," growled Jupe.

"It feels as if it would blow the island itself away," said Kit. "Mr. Crale, how long will this last?"

"I can't tell," was the answer. "If it's a cyclone it will probably go on for twenty-four hours. But I'm inclined to think it is simply a tornado, in which case it may blow over in a couple of hours."

"It will put the hat on that fool expedition of Naga's, that's one good thing," said Col.

"I can't see that," said Mr. Crale, still shouting so as to make himself heard. "The natives knew something was coming, and pulled their canoes well up and weighted them with sand. I saw them doing it. Tomorrow may be perfectly fine again, and once that fellow Naga has made up his mind to a thing I fancy it would take a lot to turn him. I am inclined to think that the best thing we can do is to take advantage of the storm to make ourselves scarce."

"That's what Jupe said," added Col, "but though I'm as keen as anyone to slip off I don't quite see how we're going to get far in this. Why, the trees on the hillside are tumbling like skittles."

"Not while it's like this, of course," agreed Mr. Crale. "We must wait until it has moderated a little, and then go."

"Where do yo' reckon to go, sah?" asked Jupe. "Ah doan't reckon we could ever launch de boat in dis heah wind."

"Boat! Good Heavens, no!" exclaimed Mr. Crale. "What we have to do is to find our way across the island to Karum's side. From what Burton has told me I think he will be easier to deal with than Naga. Are you all agreed?"

"We are," said Kit, speaking for himself and his twin.

"And me, boss," added Jupe.

"We'll go anywhere you go, sir," declared Horton.

"Very good," said Mr. Crale. "Then, as soon as ever I give the word, you follow me. You all understand?"

TO BE CONTINUED

Five-Minute Story

The Carol Singers

IT was Mary Bates—always kind-hearted—who thought it would cheer up old Mr. Midgett, and make him more sociable, if they sang him a few carols.

"He doesn't want cheering up," objected the rest of the carol-singers. "He'll probably set the dog on us."

"He's too mean to keep a dog," said Billy Watts. "And he won't give us a farthing after all that tramp across the moor."

"Carols will remind him that it is Christmas-time," said Mary.

"And then he'll want to give something, if we tell him we are collecting for the hospital and not for ourselves."

Mary had her way; and on Christmas Eve, after carolling outside every house in the village, the singers made their way to the lonely cottage across the moor.

Mr. Midgett was supposed to be a miser as well as a cranky, unsociable person who had never been known to give away a farthing in his life.

There was deep snow on the moor, and they had only a few stars overhead and Billy's lantern to help them on their way; but Mary's determination to soften the miser's heart encouraged the others to plunge onwards.

"There's a light!" cried Mary. "He's not in bed."

"Counting his gold, I expect," said Billy.

"Let's begin with 'God rest you, merry gentlemen,'" cried Mary.

They began to carol lustily, but no sooner did their fresh young voices ring through the frosty air than a dark form came flying out of Midgett's cottage and raced across the moor like the wind.

"There!" cried Billy. "This is your cheering up, Mary; we've made the old man go mad."

They rushed to the cottage window, and through a chink in the blind saw the oddest sight.

Old Mr. Midgett, gagged and bound to a chair, was dancing about the kitchen floor like a lunatic, trying to untie the cords on his wrists.

The carol-singers flew to the rescue, and when the captive was free he gasped out that some villain had maltreated him.

In fact, a burglar had arrived to cheer up Mr. Midgett and relieve him of his savings, and their coming had made him take to his heels empty-handed.

"I'll send every halfpenny of it to the bank tomorrow!" cried the old man, clutching an old leather bag.

"Better spend a little of it first. Christmas-time, you know," said Billy, rattling the hospital box hopefully.

"Well, as you've given that rascal a fright, I don't mind giving you a trifle," said old Mr. Midgett, and the trifle he put in the box made the carol-singers rejoice that they had crossed the snowy moor to cheer up the crusty old miser.



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DI MERRYMAN

Two friends had been talking about the election, and one of them asked the other:

"Is your new M.P. a good orator?"

"A good orator!" exclaimed the other. "Why, he is the finest in the country! He can convince you on any subject without taking the trouble to understand it himself!"

What Am I?

You, who in numbers take delight,
Pray tell my name from what I write:

Eleven hundred and one, it's true,
You'll find to be exact the clue;
If letters four are thus combined,
'Twill bring it clearly to your mind;
Off on hills or plains I'm seen,
And actively employed have been;
Though large and small, yet still I claim
The power to tear and cut in twain.

Solution next week

What Remained

With Uncle Joseph Micky went
Upon the ice to skate,
And just to show what he could do
He cut a figure 8.

Now, Uncle Joseph loves to set
A sum for any boy;
Mental arithmetic, in fact,
Fills Uncle's heart with joy.

"To eight and eight add eight," he said;

"By eight then multiply,
Subtract two eights, and what remains?"

To give the answer try."

But Micky well had used his skates,
And he was nowhere near.
Then, as he fled, his voice came back—

"Why, you do, Uncle dear!"

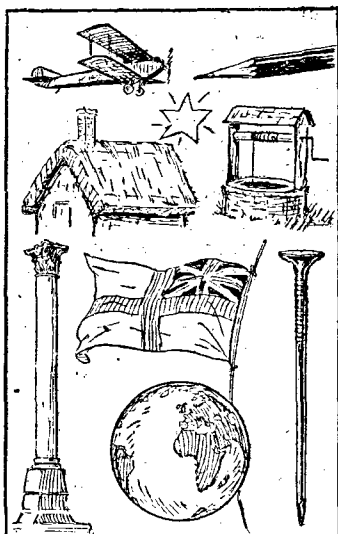
How Many Do You Know?

THERE are at least 25 different distinct meanings of the nouns break and brake. A good game for a Christmas party would be to see how many of these meanings could be remembered.

The winner is the boy or girl who gets the largest number.

WHY is a pig a paradox?
Because he is killed first and cured after.

A Hidden Word Puzzle



When placed in their correct order, the initial letters of the words represented by these pictures will spell the name of a thing that is produced in many millions every day. Can you find it?

Solution next week

WHAT bird can lift the heaviest weight? The crane.

Strange, but True

THE curious thing about a standing account is that the longer it stands the longer it runs.

P.-C. Brownie



THIS kitchen-garden Brownie
tramps
His round on solid feet,
And scares away the Beetle Boys
Who play upon his beet!

A New Mineral

A PROFESSOR of geology had placed some specimens of rocks on his desk and was going to describe them to his students. While his back was turned for a moment one of the students put among the rocks a piece of an old brick.

Then the professor went through the specimens, saying, as he picked up each, "This is a piece of sandstone," "This is a piece of granite," and so on.

At last he came to the brick, and, holding it up, said:

"And this, gentlemen, is a piece of impudence."

A Beheaded Word

THEY use my whole to carry glass;

I later to my sender pass.

Behead me, and I am the speed

At which you run or walk or read;

Now take my tail off, you will find

An animal you have to mind;

Behead again, restore my tail,

I hope at lunch you did not fail;

Cut off my tail again, and that

Will show exactly where I'm at;

Again remove my tail, and, lo!

A smaller word you could not show.

Solution next week

WHEN is a bill like a pistol?

When it is presented and discharged.

Do You Live at Halifax?

It is often said that Halifax means

holy forks, and is a reference to roads of pilgrimage converging as in a fork.

But this is not the true derivation. As far back as 1190 we find the name spelt Halifex, which is generally recognised as a misspelling for Halifeax; and this is the Old English halig feax, meaning

holy locks, or head of hair, probably a reference to some relic or picture of the head of St. John, to whom a church was dedicated there soon after 1100.

WHAT is that which, if you simply name it, you are sure to break it? Silence.

ANSWERS TO LAST WEEK'S PUZZLES

A Puzzle in Rhyme
Coal
An Enigma

If the letter I were put in the place of Stanley in the first line it would make the word onion, and an onion always brings tears to the eyes.

Hidden Poets
Lowell, Howitt, Cowper, Gay, Gray

Who Was He?
The Great Discoverer was Joseph Priestley.

Jacko Spares a Foe

As Jacko was going off to school his big brother called him. "Jacko," he said, "what was that frightful crash I heard in the night?"

"Me throwing a boot at a wretched mouse that kept gnaw, gnaw, gnaw, till I couldn't get a wink of sleep," said Jacko.

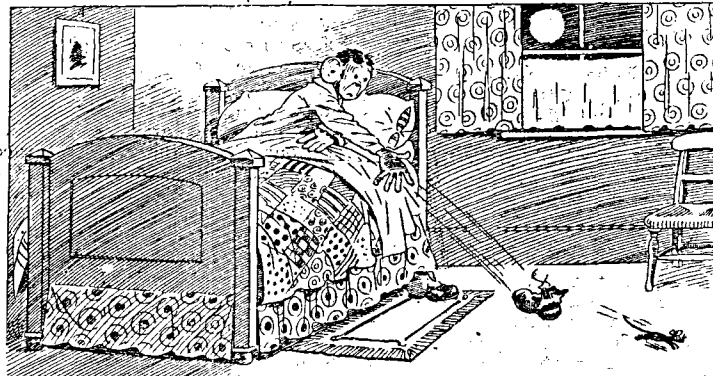
"Well, you woke me up," declared Adolphus. "You'd better set a trap," he added.

Jacko did as he was told—that very night. He was dozing off when—click! he heard the trap door fall. He got out of bed, and saw his terrified little prisoner looking at him with bright eyes.

"Poor little chap!" thought Jacko. "How pretty he is! I wonder how I'd feel if I was in a giant's cage. Tomorrow he'll be drowned. No! He shan't be! I expect he wants to live as much as I do." So saying, Jacko opened the trap, and the mouse ran off to freedom.

But never was anyone more punished for doing a kind action than Jacko, for the mouse came nibbling each night.

Jacko hoped that if it had crumbs it might not gnaw wood, so he used to leave food about. Thus encouraged, the mouse



Jacko aimed a boot at it

grew quite impertinent, running about the room when Jacko was there, as though it knew him for a friend.

One day Jacko opened an old cupboard he seldom used, and found a curious ball made of tiny scraps of paper, bitten up small. A group of tiny heads poked out. It was a mouse's nest!

Instead of calling the cat, Jacko shut the door, and said nothing about it.

That night Jacko was wakened from sleep by feeling something run over his face. He started up, frightened, half awake, wondering who had touched him. Then he heard a mouse scuttle over the floor.

"This is getting too bad!" he exclaimed. "I'm wide awake now. I—why, what a funny smell! It's like burning!"

He lit a candle, and opened his door. The smell was stronger. He went down the stairs. His eyes began to smart. He saw smoke coming from the kitchen door.

The next moment he was dashing upstairs shouting "Fire!"

Some sparks had set the matting in a blaze.

Fortunately the fire had not taken much hold. Adolphus and Mr. Jacko were able to keep it at bay with buckets of water till the Fire Brigade, summoned by Jacko, came up.

Of course, Jacko was the hero of the hour. But he kept saying, "It isn't me you've got to thank, but the mouse."

The paragraph on the right is a French translation of the paragraph on the left

A Wonderful Machine

A strange anniversary has lately been celebrated in America—the fiftieth birthday of the typewriter.

The use of this machine has become so universal that it is hard to believe that only fifty years have elapsed since it was first conceived in a little workshop near Milwaukee, U.S.A.

Three middle-aged men had been pottering around trying to devise a scheme for numbering the pages in blank books, when it occurred to one of them that a machine could surely be contrived for writing letters, and words as well as figures.

As a result a machine was perfected, and manufacture started in 1873, and, while it wrote only capital letters and was a very primitive affair, many of its main principles survive in the latest models.

Une Machine Merveilleuse

On vient de célébrer dernièrement en Amérique un étrange anniversaire—le cinquantième de la machine à écrire.

L'usage de cette machine est devenu si universel, qu'il est difficile de croire que cinquante ans seulement se sont écoulés depuis son origine dans un petit atelier près de Milwaukee, aux États-Unis.

Trois hommes entre deux âges s'occupaient à découvrir un moyen de numérotter les pages des livres blancs, lorsque l'idée vint à l'un d'eux qu'on pourrait sûrement combiner une machine pour écrire des lettres et des mots aussi bien que des chiffres.

Le résultat fut qu'on perfectionna une machine, et la fabrication commença en 1873, et, bien qu'elle n'écrivit qu'en lettres majuscules et qu'elle fût d'une construction très primitive, un bon nombre de ses éléments essentiels ont été conservés dans les derniers modèles.

Tales Before Bedtime

Hot Chestnuts

ONE cold night Tom fetched a loaf for poor Mrs. Bede, who lived in his street and was too old and ailing to go out.

"There's a penny for yourself," she said.

And Tom, who was a poor little boy who did not have many pennies, thought he would treat himself to a pennyworth of hot chestnuts. The chestnut-man's stall looked so warm and cheerful, and the roasting chestnuts were as cosy as little fires.

As he was crossing the road to the stall he heard somebody crying. It was the little girl who lived at the newspaper shop with an aunt who was not very kind to her. She had been to fetch some milk in a jug, and somebody had pushed against her, and part of the milk had splashed over.

"Well, don't take on like that, missy; there's not more than a penn'orth spilt," said the chestnut man kindly.

"But she wants it all," cried the little girl. "Oh, she'll whip me, and I didn't do it on purpose!"

She was trembling with cold and fright, and Tom thought it must be dreadful to have an aunt who whipped you when you did not deserve it.

"Never mind," he said, "I've got a penny. We'll go back to the dairy and ask them to fill up the jug again."

"And when you've taken home the milk, you and the little fellow just step round here again, and have a bit of supper with me," the chestnut man called out.

This was splendid, because neither the little girl nor Tom had ever been invited to a supper-party before.



She was trembling with fright

They ran off for the milk, and then carried it back to the newspaper shop, and, thanks to the penny, there was no whipping for the little girl!

The supper-party at the chestnut-stall was ever so jolly. It was so cosy behind, with a box for a table, and a clean newspaper for a cloth, and sacks to keep your toes warm, and hot chestnuts and chipped potatoes and hot coffee.

After the supper-party they served other cold and hungry people.

Indeed, they were so useful that the chestnut man said they must have a pocketful of hot chestnuts as wages.

The Children's Newspaper grew out of My Magazine, the monthly the whole world loves. My Magazine grew out of the Children's Encyclopedia, the greatest book for children in the world.

CHILDRENS NEWSPAPER

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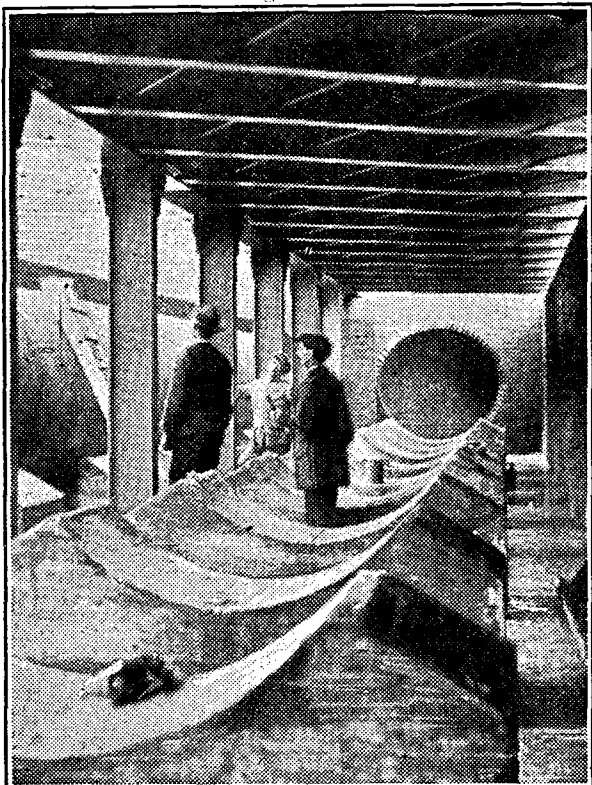
WAR HORSE AS PEACE HORSE · AMAZING MOTOR TRACK · HOUSES ON STILTS



A Game on the Ice—After several days of frost, before the ice was strong enough to bear skaters, boys everywhere were enjoying sliding, like these boys at Wilden, in Bedfordshire



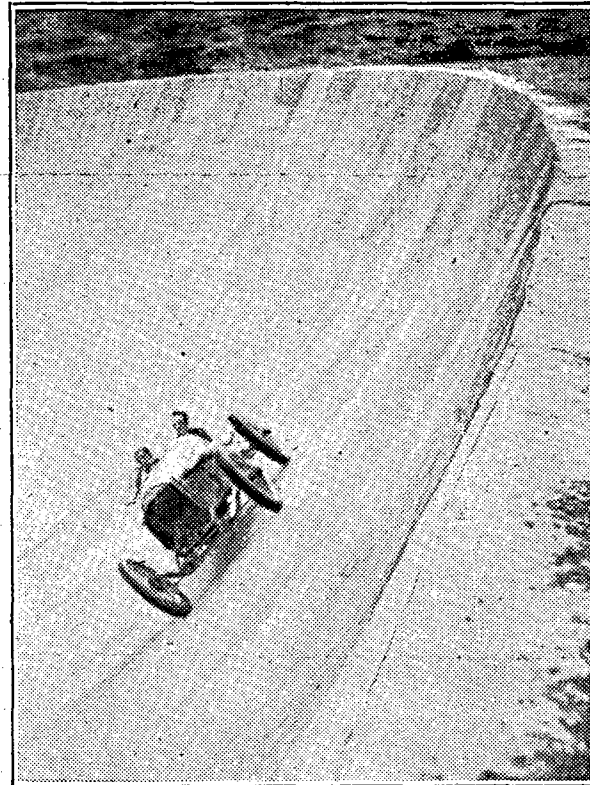
Women at Hockey—University women all over the country are great hockey players, and here we see a tussle at the Midland University goal when that side played London University



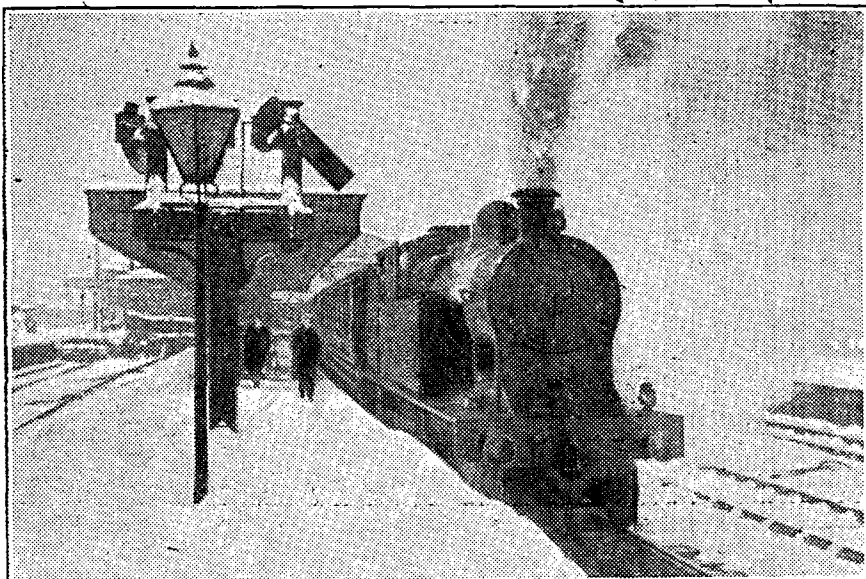
Building a New Water Main—A water main is being laid under the new West Road between Kew and Hounslow. It will be accessible to workmen without the trouble of digging up the road



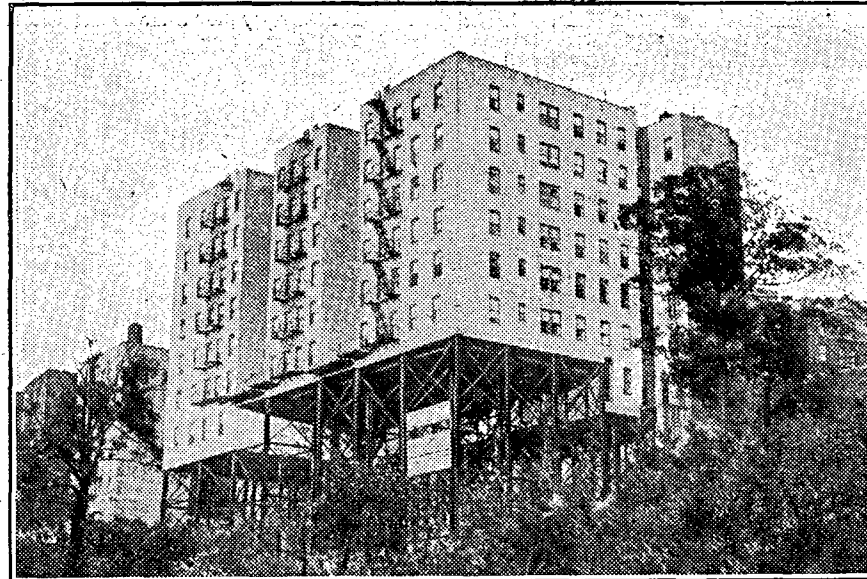
War Horse Turns Peace Horse—The horse Charlie, now in the London Police, was twice wounded, and was the first horse over the Hindenburg line in 1918



A Wonderful Motor-Track—This track was recently opened at Stiges, near Barcelona. The banking at each end is very steep, and, as can be seen, a racing car travels almost on its side



Snow in the North—During the severe spell of cold weather snow fell heavily in the North, and in some districts snow ploughs had to be used to clear the line so that the trains could proceed.



A Building on Stilts—A large block of flats was built on a piece of steeply sloping ground, and the architects overcame the difficulties of construction by building one side on stilts

FRONTIERS FOR THE NEXT GREAT WAR—SEE THE REMARKABLE ARTICLE IN MY MAGAZINE

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